ORDER NO.MD0603058C1

A6

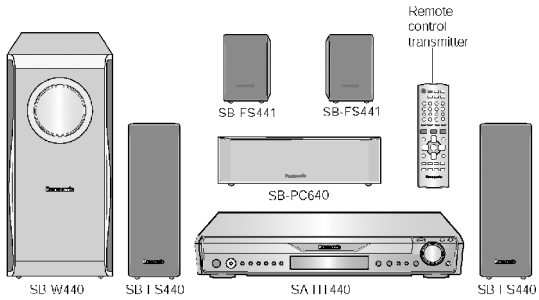
Service Manual

DVD Home Theater Sound System

SA-HT440P / SA-HT440PC

Colour

(S).....Silver Type



SPECIFICATIONS

Specifications

- **General**

Power Source:	**AC 120V, 60Hz**
Power consumption:	**90 W**
Dimensions (W×H×D):	**430×70×439.2 mm (16-15/16”×2-3/4”×17-19/64”)**
Mass:	**4.7 kg (10.36lbs)**

- **Amplifier section**

RMS Output Power: Dolby Digital Mode

- **Total RMS Dolby Digital mode Power:** **850 W**

At 1kHz and total harmonic of 10%

- **Front:** **110 W/ Channel (3 Ω)**
- **Center:** **225 W/ Channel (6 Ω)**
- **Surround:** **90 W/ Channel (4 Ω)**

At 100Hz and total harmonic of 10%

- **Active subwoofers:** **225 W/ Channel (6 Ω)**

FTC Output Power: Dolby Digital Mode

- **Total FTC Dolby Digital mode Power:** **360 W**

At 120Hz-20kHz and total harmonic of 1%

- **Front:** **40 W/ Channel (3 Ω)**
- **Center:** **75 W/ Channel (6 Ω)**
- **Surround:** **70 W/ Channel (4 Ω)**

At 45Hz-120Hz and total harmonic of 1%

- **Subwoofer:** **65 W/ Channel (6 Ω)**

- **FM tuner section**

Preset Memory:	**FM 15 stationsAM/MW 15 stations**
Frequency Range:	**87.9-107.9MHz (200kHz in step) 87.5-108.0MHz (100kHz in step)**
Sensitivity:	**2.5 μ V (IHF)**
S/N 26dB	**2.2 μ V**
Antenna Terminals:	**75 Ω (unbalanced)**

- **AM tuner section**

Frequency Range:	**520-1710kHz (10kHz in step)**
AM Sensitivity S/N 20dB at 1000kHz:	**560 μ V/m**

- **Phone Jack:**

Terminal:	**Stereo 3.5 mm (1/8”) jack**

- **Front M. Port:**

Sensitivity:	**100mV (4.7k Ω)**
Terminal (Input):	**Stereo 3.5 mm (1/8”) jack**

- **Disc section**

Discs played [8 cm (3”) or 12 cm (5”)]:

(1) DVD [DVD-Video, DVD-Audio]

(2) DVD-RAM [DVD-VR, JPEG(*4,5)]

(3) DVD-Video

(4) DVD-RW [DVD-Video]

(5) +R/+RW [Video]

(6) CD, CD-R/RW [CD-DA, Video CD, SVCD(*1), MP3(*2,5), WMA(*3,5), JPEG(*4,5), HighMAT Level 2 (Audio and Image)]

***1 Conforming to IEC62107**

***2 MPEG-1 Layer 3, MPEG-2 Layer 3**

***3 Windows Media Audio Ver.9.0 Class 2A**

· ● Not compatible with Multiple Bit Rate (MBR)

***4 Exif Ver 2.1 JPEG Baseline files**

● Picture resolution: between 320 x 240 and 6144 x 4096 pixels (Sub sampling is 4:2:2 or 4:2:0). Extremely long and thin pictures may not be displayed.

***5 The total combined maximum number of recognizable audio and picture contents and groups: 4000 audio and picture contents and 400 groups.**

Pick up:

Wavelength:

● CD:	**785nm**
● DVD:	**662nm**

Laser power:

● CD:	**CLASS I**
● DVD:	**CLASS II**

Audio output (DISC):

Number of channels:	**5.1 ch (FL, FR, C, SL, SR, SW)**

Audio performance:

Frequency response:

DVD (linear audio):	**4 Hz-22 kHz (48 kHz sampling)**
	4 Hz-44 kHz (96 kHz sampling)
DVD-Audio:	**4 Hz-88 kHz (192 kHz sampling)**
CD-Audio:	**4 Hz-20 kHz**

S/N ratio:

CD-Audio:	**105 dB**

Dynamic range:

DVD (linear audio):	**95 dB**
CD-Audio:	**95 dB**

Total harmonic distortion:

CD-Audio:	**0.005 %**

● Video section

Video system:

Signal system:	**NTSC**

Composite video output:

Output level:	**1 Vp-p (75 Ω)**

Terminal: **Pin jack (1 system)**

S-video output:

Y output level: **1 Vp-p (75 Ω)**

C output level: **NTSC; 0.286 Vp-p (75 Ω)**

Terminal **S terminal (1 system)**

Component video output (480p/480i):

Y output level: **1 Vp-p (75 Ω)**

PB output level: **0.7 Vp-p (75 Ω)**

PR output level: **0.7 Vp-p (75 Ω)**

Terminal: **Pin jack (Y: green, P_B: blue, P_R: red) (1 system)**

Power consumption in standby mode:

approx 0.4W

Note:

1. **Specifications are subject to change without notice. Mass and dimensions are approximate.**
2. **Total harmonic distortion is measured by the digital spectrum analyzer.**

Solder:

This model uses lead free solder (PbF).

Mechanism:

This model uses RC1 (Rotary tray) mechanism.

System	SC-HT440P	SC-HT440PC
Main unit	SA-HT440P	SA-HT440PC
Speaker system	SB-HT440P	SB-HT440P
Active subwoofer	SB-W440P	SB-W440P

Speaker system	SB-HT440P
Front speakers	SB-FS440P
Center speaker	SB-PC640P
Surround speakers	SB-FS441P

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.
WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

Designed for Windows Media™

HIGH M·A·T AUDIO·IMAGE

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■ **Built-in decoders**
You can play discs with these symbols.

DOLBY DIGITAL

DIGITAL dts SURROUND

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. Safety Precautions

1.1. GENERAL GUIDELINES

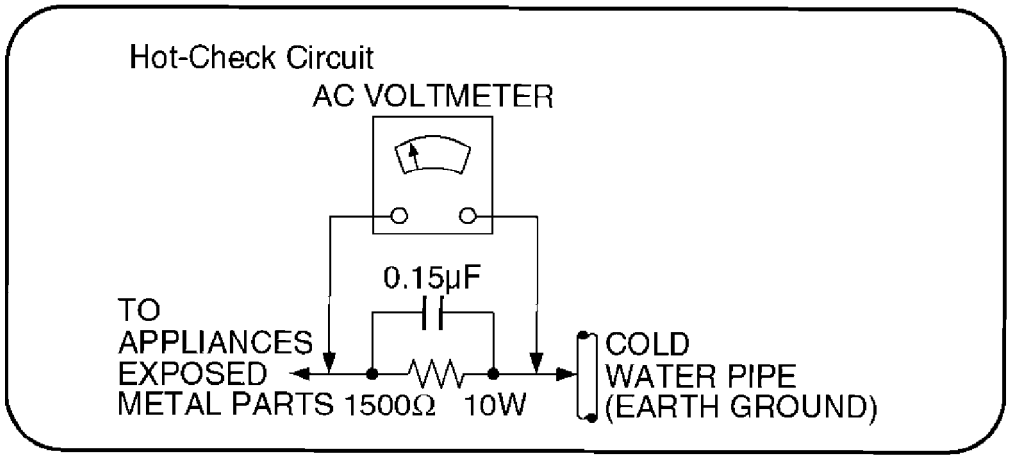
1. **When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.**
2. **After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.**

3. **After servicing, carry out the following leakage current checks to prevent the customer from being exposed to shock hazards.**

1.1.1. LEAKAGE CURRENT COLD CHECK

1. **Unplug the AC cord and connect a jumper between the two prongs on the plug.**
2. **Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M Ω and 5.2M Ω . / When the exposed metal does not have a return path to the chassis, the reading must be ∞.**

Figure 1



1.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. **Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.**
2. **Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.**
3. **Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.**
4. **Check each exposed metallic part, and measure the voltage at**

each point.

5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

1.2. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C5700, C5717, C5718, C5742, C5796 through a 10 Ω, 10 W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at AC 120 V, 60 Hz in NO SIGNAL mode volume minimal should be ~ 900 mA.

1.2.1. Caution for fuse replacement

(For English)
CAUTION:

Replace with the same type fuse:
(Manufacturer: LITTELFUSE, INC, Type: F1, 6.3A, 125V)

(For Canadian French)
ATTENTION:

Utiliser un fusible de rechange de mme type:
(Manufacturer: LITTELFUSE, INC, Type: F1, 6.3A, 125V)

1.3. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.

- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are
"shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.
If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

2. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. **Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.**
2. **After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.**
3. **Use only a grounded-tip soldering iron to solder or unsolder ES devices.**
4. **Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.**
5. **Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.**
6. **Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).**
7. **Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.**

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. **Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).**

IMPORTANT SAFETY NOTICE

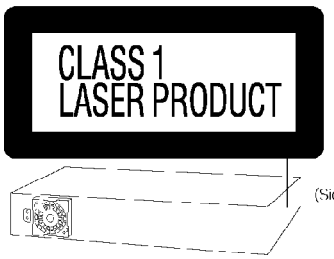
There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. Precaution of Laser Diode

CAUTION:

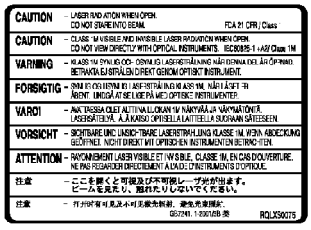
This unit utilizes a class 1 laser.
Invisible laser radiation is emitted from the optical pickup lens.
Wavelength: 662nm(DVD)/785nm(CD).
Maximum output radiation power from pickup: 100 μ W/VDE
When the unit is turned on:

1. **Do not look directly into the pick up lens.**
2. **Do not use optical instruments to look at the pick up lens.**
3. **Do not adjust the preset variable resistor on the pickup lens.**
4. **Do not disassemble the optical pick up unit.**
5. **If the optical pick up is replaced, use the manufacturer's specified replacement pick up only.**
6. **Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.**



(Side of product)

The laser product label has not been attached to products for the U.S.A and Canada



(Inside of product)

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4. About Lead Free Solder (PbF)

Distinction of PbF PCB: PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).

- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).

When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

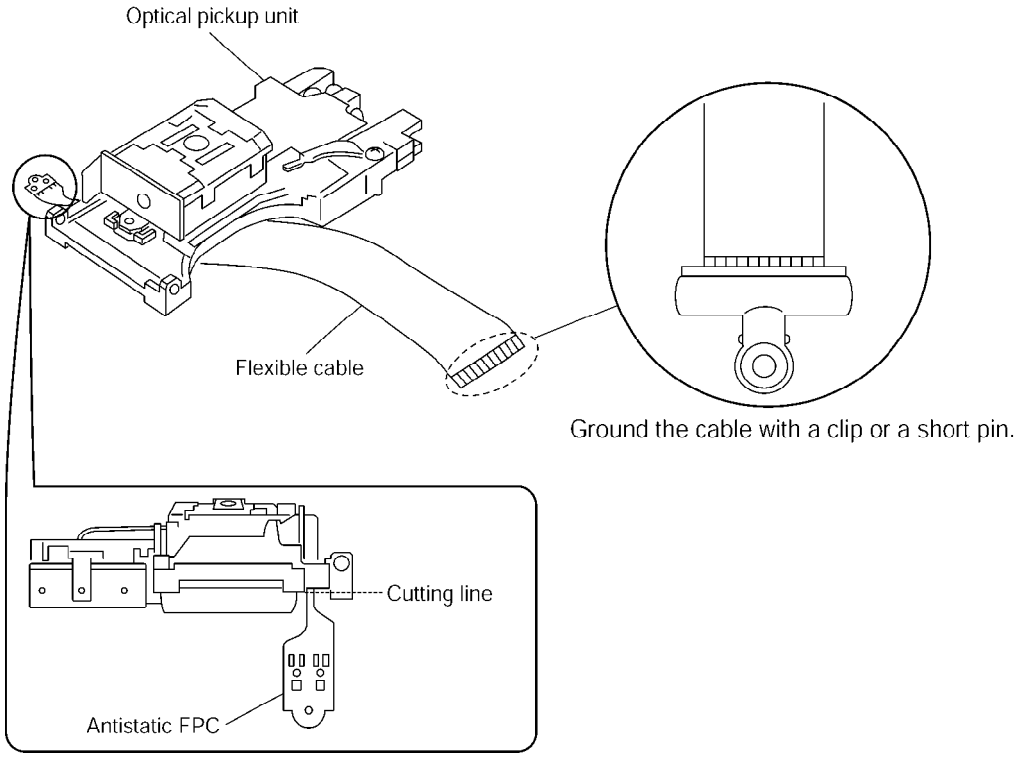
5. Handling Precautions for Traverse Unit

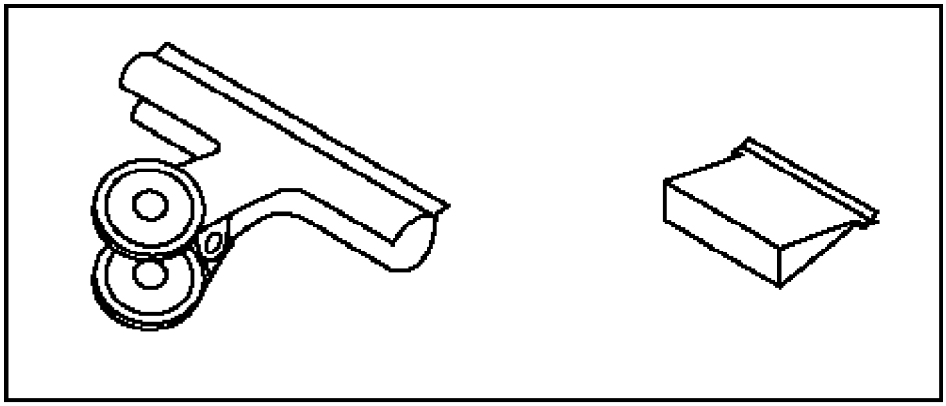
The laser diode in the optical pickup unit may break down due to static electricity of clothes or human body. Special care must be taken avoid caution to electrostatic breakdown when servicing and handling the laser diode.

5.1. Cautions to Be Taken in Handling the Optical Pickup Unit

The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid caution to electrostatic discharge damage when servicing the laser diode.

1. **Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.**
2. **To prevent the laser diode from the electrostatic discharge damage, the flexible cable of the optical pickup unit removed should be short-circuited with a short pin or a clip.**
3. **The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the flexible cable.**
4. **The antistatic FPC is connected to the new optical pickup unit. After replacing the optical pickup unit and connecting the flexible cable, cut off the antistatic FPC.**





Clip or Short pin

5.2. Grounding for electrostatic breakdown prevention

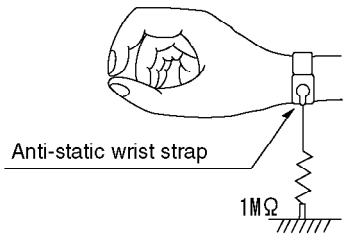
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

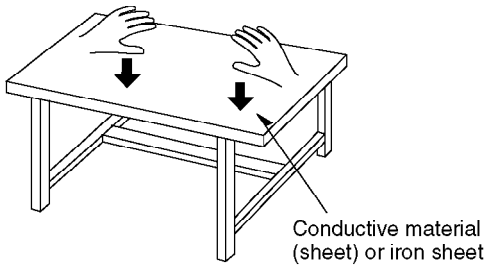
5.2.1. Worktable grounding

1. **Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.**

5.2.2. Human body grounding

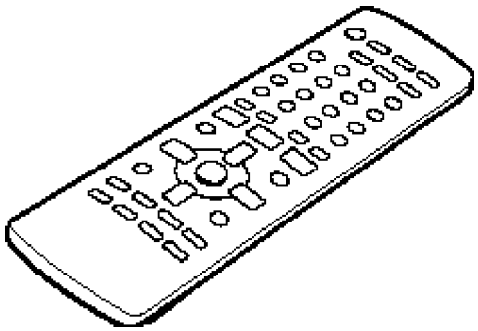
1. **Use the anti-static wrist strap to discharge the static electricity form your body.**



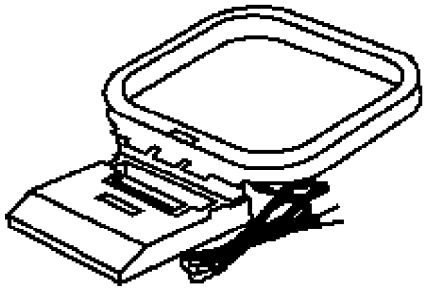


6. Accessories

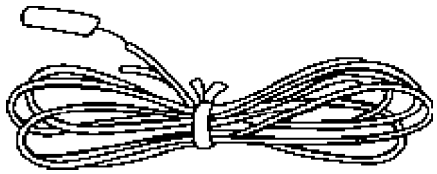
Remote control



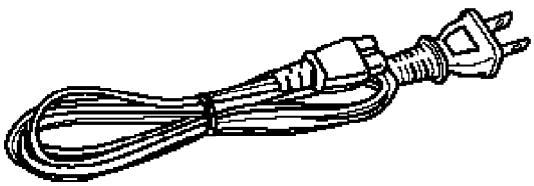
AM loop antenna



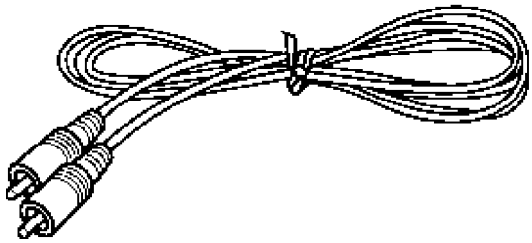
FM indoor antenna



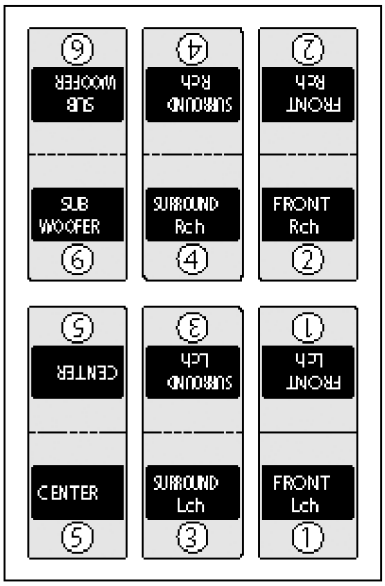
AC cord



Video Cable



Speaker label



7. Operation Procedures

7.1. Operating instructions

7.1.1. Remote Control Key Buttons Operations

7.1.2. Main Unit Key Buttons Operations (SA-HT440)

7.1.3. Wireless Surround Speaker Key Buttons Operations (SE-FX60)

Note: Refer to original service manual (Order No. MD0603058C1) for more information of this unit (SH-FX60).

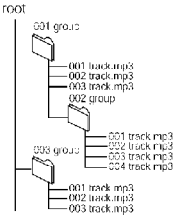
7.2. Disc information

Tips for making WMA/MP3 and JPEG discs (For CD-R, CD-RW)

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.
- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.
- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

Naming folders and files
(Files are treated as content and folders are treated as groups on this unit.)
At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).
Files must have the extension:
".WMA" or ".wma"
".MP3" or ".mp3"
".JPG", ".jpg", ".JPEG" or ".jpeg"

e.g. MP3



WMA

- You cannot play WMA files that are copy protected.
- This unit does not support Multiple Bit Rate (MBR).

MP3

This unit does not support ID3 tags.
Compatible sampling rates: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz.

JPEG

- To view JPEG files on this unit:
  - Take them on a digital camera that meets the DCF Standard (Design rule for Camera File system) Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture un-viewable.
  - Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play pictures with attached audio.

8. New Features

8.1. Using of Receiver Unit (SH-FX60 / SH-FX80)

- This model can be equipped with the digital transmitter and receiver to enjoy surround sound wirelessly.

8.1.1. Below is tips on using the digital receiver (SE-FX60)

Making the wireless link

Refer also to the operating instructions for your home theater unit.

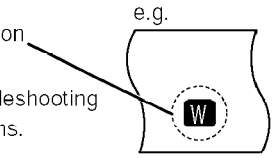
1 **Turn on your home theater unit.**

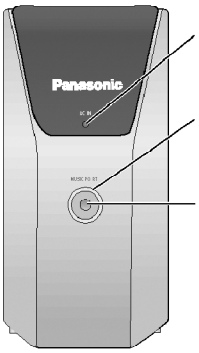
- Ensure the wireless system is plugged into the AC outlet.

2 **Check the wireless link indicator on the home theater unit.**

"W" should light up in the display on the home theater unit.

- If "W" is flashing, refer to troubleshooting guide of the operating instructions.





Power indicator [AC IN]
This indicator lights when the unit is pluggged into the AC outlet.

Lighting Ring
The light goes out when the unit is in standby mode.

MUSIC PORT
Allows you to connect and enjoy music from an external device (e.g. MP3 player). Refer to your home theater unit's operating instructions.

- Select the appropriate input source on your home theater unit (e.g. "REAR MUSIC P.").
- Plug type: 3.5mm (1/8") monaural
- Music is not available without wireless link.

3 **Start play on the home theater unit.**

Conserving power

The wireless system consumes a small amount of power, even when it is in standby mode (approx. 0.5W: Transmit mode, 1.2W: Receive mode). To save power when the unit is not to be used for a long time, unplug it from the household AC outlet.

8.1.2. Tips on using digital transmitter (SH-FX60T)

Connecting and positioning

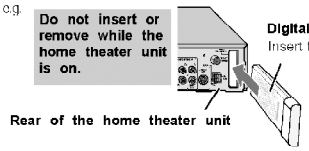
Preparation

- Turn off all equipment before connection and read the appropriate operating instructions.
- Connect the AC power supply cord after all other connections are complete.

Connecting the digital transceiver

Insert the digital transceiver into the slot of your home theater unit.

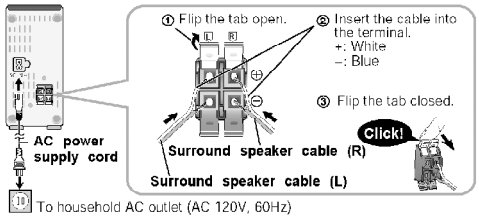
e.g.


Do not insert or remove while the home theater unit is on.
Digital transceiver
Insert fully untill you hear a click.
Rear of the home theater unit

Connecting the surround speaker cables to the wireless system

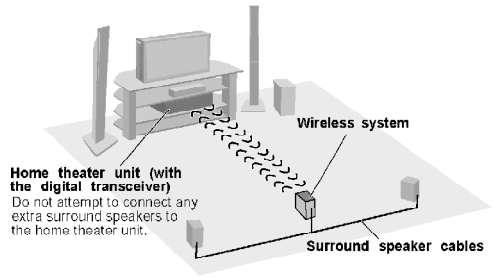
1 If the surround speaker cables have already been connected
Disconnect the surround speaker cables from your home theater unit.

2 **Connect the surround speaker cables to the wireless system.**


① Flip the tab open.
② Insert the cable into the terminal.
+: White
–: Blue
③ Flip the tab closed.
Click!
Surround speaker cable (R)
Surround speaker cable (L)
AC power supply cord
To household AC outlet (AC 120V, 60Hz)

● Wireless setup diagram

e.g.


Wireless system
Home theater unit (with the digital transceiver)
Do not attempt to connect any extra surround speakers to the home theater unit.
Surround speaker cables

Place the wireless system within approximately 10m (33ft) from the home theater unit.

[Note]

Do not use the wireless system and digital transceiver in a metal cabinet or bookshelf.

8.1.3. Below is tips on using digital receiver (SB-FX80)

Making the wireless link

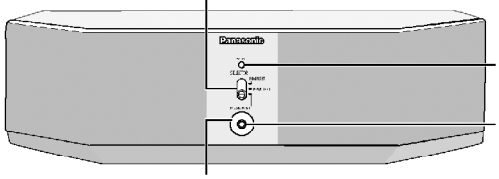
Refer also to the operating instructions for your home theater unit.

1 **Turn on your home theater unit.**
Ensure the wireless system is plugged into the AC outlet.

2 **Select "MAIN SET" or "MUSIC PORT" on the wireless sound system.**

SELECTOR

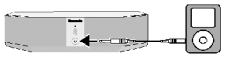
MAIN SET: Select to enjoy audio from your home theater unit.
POWER OFF: Select to turn off the wireless sound system.
MUSIC PORT: Select to enjoy audio from the MUSIC PORT on the wireless sound system.



Power indicator [AC IN]
This indicator lights when the unit is pluggged into the AC outlet.

MUSIC PORT
Allows you to connect and enjoy music from an external device (e.g. MP3 player).
Set the selector on the wireless sound system to MUSIC PORT.
To avoid distorted sound, make sure that any equalizer function of your external device is turned off.
Plug type: 3.5mm (1/8 z) stereo

e.g.



External device (not included)
Reduce the volume before connecting.

Lighting Ring
The light goes out when the unit is in standby mode, or turned off.

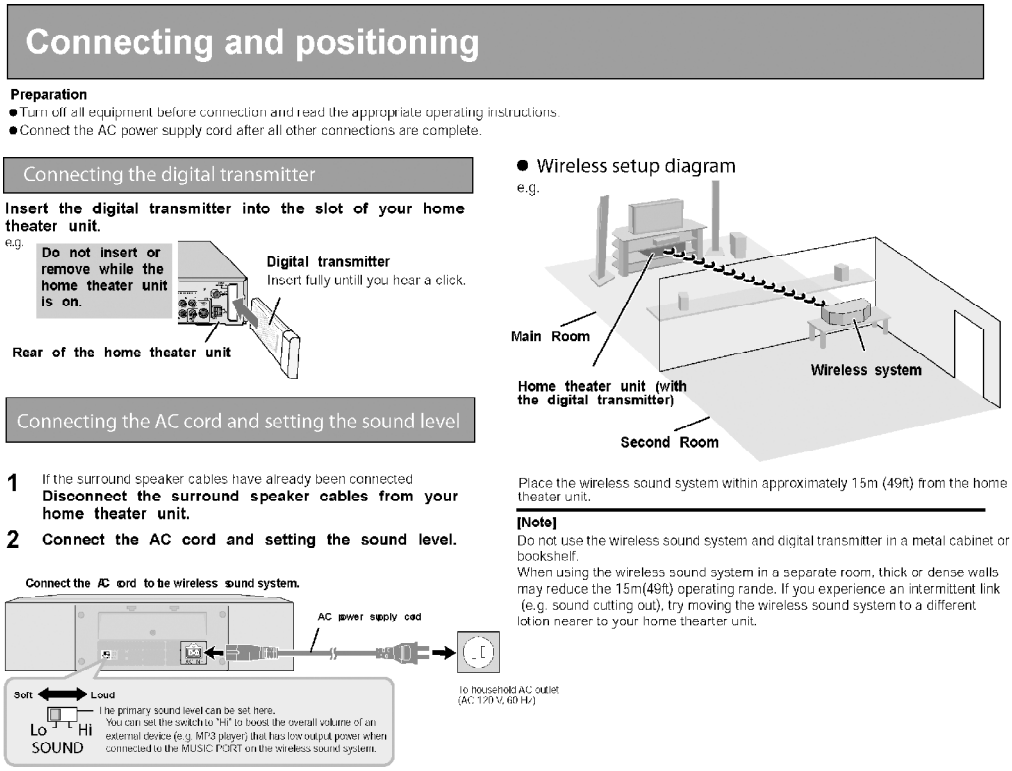
3 **Check the wireless link indicator on the home theater unit.**
The wireless link indicator (e.g. "[W]" or LED should light up on the home theater unit.
If the indicator is flashing, refer to troubleshooting guide of the operating instructions.

4 **Start play on the home theater unit.**

Conserving power

The wireless system consumes a small amount of power, even when it is in standby mode (approx. 0.5W). To save power when the unit is not to be used for a long time, unplug it from the household AC outlet.

8.1.4. Tips on using digital transmitter (SH-FX80T)



9. Self-Diagnosis and special mode setting

9.1. Service Mode Summary Table

The service modes can be activated by pressing various button combination on the player and remote control unit.

Below is the summary of major checking:

Player buttons	Remote control unit buttons	Application	N
STOP	0	Error code display	(Refer to section, Self Diag Function Code").
	5	Jitter checking	(Refer to section ' Service I Table 1" informat
	6	Region display and mode	(Refer to section ' Service I Table 1" informat
	7	Micro-processor firmware version check	
	FUNCTIONS	DVD laser drive current check	(Refer to section ' Optical F Self-Diag
	3	CD laser drive current check	
	PAUSE	Writing o0f laser drive current value after replacement of optical pickup (Do use this function only when optical pickup is replaced.)	
	≧10	Initialization of the player (factory setting is restored.) Used after replacement of micro-computer, FLASH ROM IC, EEPROM.	(Refer to section ' Service I Table 1" informat
	8	DVD HDMI Module firmware version check	
	ENTER	DVD Module Reset.	

9.2. Service Mode Table 1

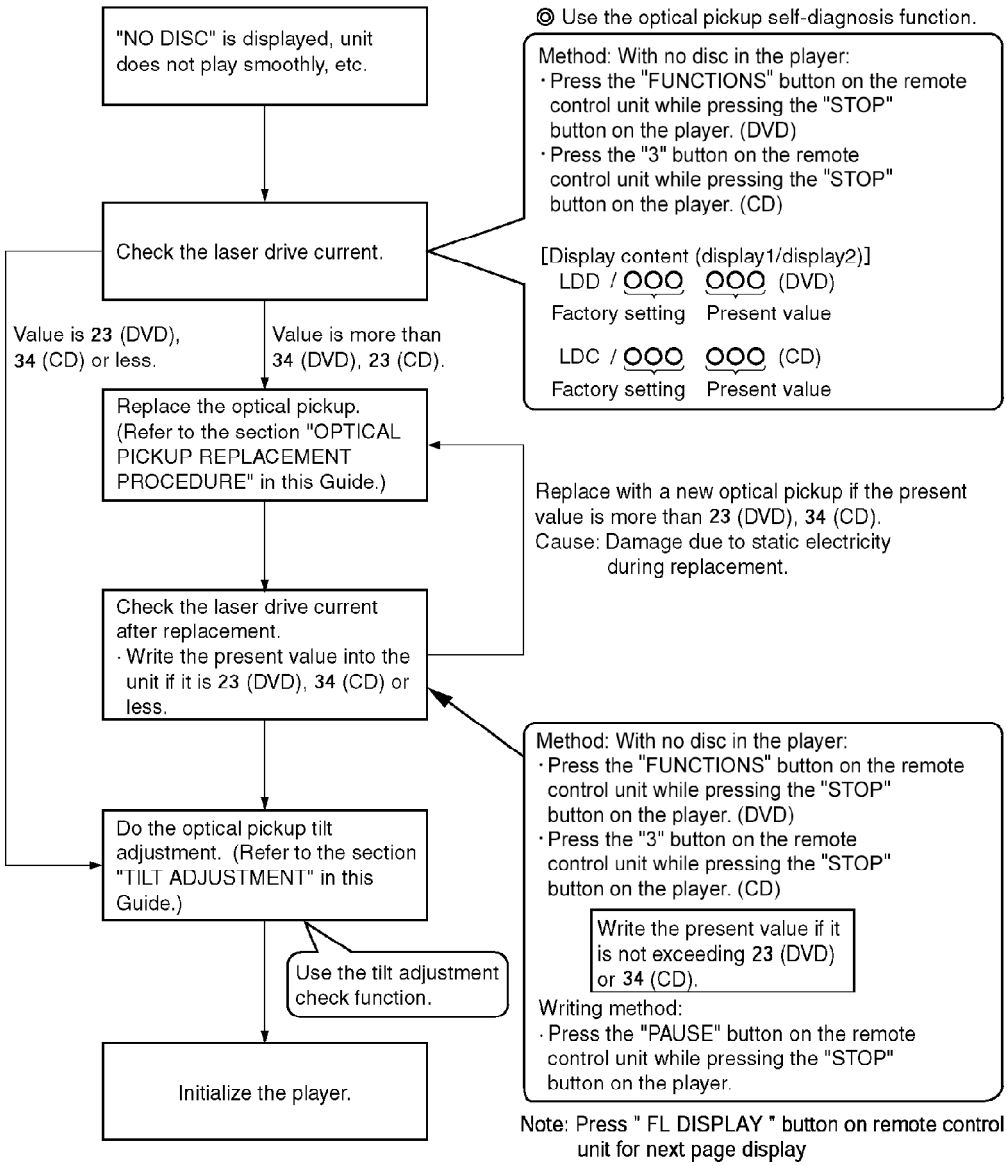
By pressing various button combinations on the player and remote control unit can activate the various service modes for checking.

Special Note:
Due to the limitations of the no. characters that can be shown on FL Display, the "FL Display" button on the remote control unit is used to show the following page. (Display 1/Display 2).

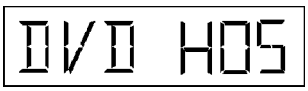
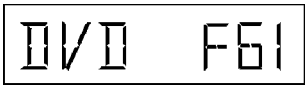
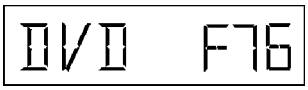
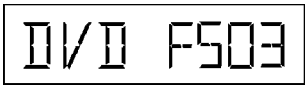
9.2.1. Optical Pick-up Self-Diagnosis

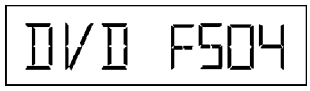
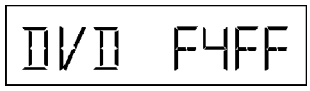
The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective self-diagnosis and tilt adjustment. Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

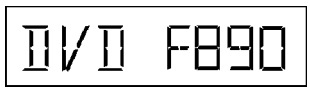
Note:
Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)

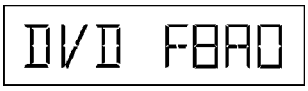

◎ Use the optical pickup self-diagnosis function.
"NO DISC" is displayed, unit does not play smoothly, etc.
Method: With no disc in the player:
· Press the "FUNCTIONS" button on the remote control unit while pressing the "STOP" button on the player. (DVD)
· Press the "3" button on the remote control unit while pressing the "STOP" button on the player. (CD)
Check the laser drive current.
[Display content (display1/display2)]
LDD / OOO OOO (DVD)
Factory setting Present value
LDC / OOO OOO (CD)
Factory setting Present value
Value is 23 (DVD), 34 (CD) or less.
Value is more than 34 (DVD), 23 (CD).
Replace the optical pickup. (Refer to the section "OPTICAL PICKUP REPLACEMENT PROCEDURE" in this Guide.)
Replace with a new optical pickup if the present value is more than 23 (DVD), 34 (CD).
Cause: Damage due to static electricity during replacement.
Check the laser drive current after replacement.
· Write the present value into the unit if it is 23 (DVD), 34 (CD) or less.
Method: With no disc in the player:
· Press the "FUNCTIONS" button on the remote control unit while pressing the "STOP" button on the player. (DVD)
· Press the "3" button on the remote control unit while pressing the "STOP" button on the player. (CD)
Write the present value if it is not exceeding 23 (DVD) or 34 (CD).
Writing method:
· Press the "PAUSE" button on the remote control unit while pressing the "STOP" button on the player.
Do the optical pickup tilt adjustment. (Refer to the section "TILT ADJUSTMENT" in this Guide.)
Use the tilt adjustment check function.
Initialize the player.
Note: Press " FL DISPLAY " button on remote control unit for next page display

9.3. DVD Self Diagnostic Function-Error Code

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remark
U11	Focus servo error	Focus coil NG (OPU unit abnormal)		Press [■ ST on main unit f next error.
H01	Tray loading error / abnormality	The tray unit is not able to open		Press [■ ST on main unit f next error
H02	Spindle servo error, DSC disc motor error	(Spindle servo, DSC (IC8251) Spindle motor, CLV servo error)		Press [■ ST on main unit f next error
H03	Traverse motor error	(Traverse motor, IC8251)		Press [■ ST on main unit f next error
H04	Tracking servo error	Tracking coil NG (OPU unit abnormal)		Press [■ ST on main unit f next error
H05	Seek timeout error	Timeout of unit when seeking time is reached		Press [■ ST on main unit f next error
H15	Disc tray open detection switch (S9001) failure	The disc tray cannot be opened: it closes spontaneously		Press [■ ST on main unit f next error
H16	Disc tray close detection switch (S9001) failure	The disc tray cannot be closed : it opens spontaneously		Press [■ ST on main unit f next error
F61	Power digital amp IC op & DC output voltage abnormal.	Upon power-on PCONT=High, DCDET=Low		Press [■ ST on main unit f next error
F76	Power digital amp IC op & DC output voltage abnormal.	Speaker Jack shorted or amp circuit		Press [■ ST on main unit f next error
F500	DSC error	DSC (IC8251) stops in the occurrence of servo error (startup, focus error, etc.)		Press [■ ST on main unit f next error
F501	DSC not Ready error	DSC-system computer communication error (Communication failure caused by idling of DSC)		Press [■ ST on main unit f next error
F502	DSC Time out error	Similar as F500		Press [■ ST on main unit f next error
F503	DSC communication Failure	Communication error (result error occurred although communication command was sent)		Press [■ ST on main unit f next error

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remark
F504	Abnormal adjusting DSC data slice offset			Press [■ ST on main unit f next error
F505	DSC Attention error	Similar as F500		Press [■ ST on main unit f next error
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc media		Press [■ ST on main unit f next error
F600	Access failure to management information caused by demodulation error	Operation stopped because navigation data is not accessible caused by the demodulation defect		Press [■ ST on main unit f next error
F601	Indeterminate sector ID requested	Operation stopped caused by the request to access abnormal ID data		Press [■ ST on main unit f next error
F602	Access failure to LEAD-IN caused by demodulation error	LEAD IN data unreadable		Press [■ ST on main unit f next error
F603	Access failure to KEYDET caused by demodulation error	Access failure to CSS data of disc		Press [■ ST on main unit f next error
F610	ODC abnormality	No permission for command execution		Press [■ ST on main unit f next error
F611	No CRC OK for a specific time (CD)	Access failure to seek address in CD series		Press [■ ST on main unit f next error
F612	No CRC OK for a specific time (DVD)	Access failure to ID data in DVD series		Press [■ ST on main unit f next error
F620	Laser safeguard: high temperature condition	High temperature of the laser guide unit (OPU unit)		Press [■ ST on main unit f next error
F621	Laser safeguard: circuit failure condition	Circuitry failure of the laser guide unit (OPU unit)		Press [■ ST on main unit f next error
F103	Illegal highlight Position	Big possibility of disc specification violation during highlight display		Press [■ ST on main unit f next error
F4FF	Force initialize failure (time out)	Timeout when force initialization fails		Press [■ ST on main unit f next error

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remark
F700	MBX overflow	When replying message to disc manager		Press [■ ST on main unit f next error
F701	Message command does not end	Next message is sent before replying to disc manager		Press [■ ST on main unit f next error
F702	Message command changes	Message is changed before it is sent as a reply to disc manager		Press [■ ST on main unit f next error
F880	Task number is not appropriate	Message coming from a non-existing task		Press [■ ST on main unit f next error
F890	Sending message when message is being sent to AV task	Sending message to AV task		Press [■ ST on main unit f next error
F891	Message couldn't be sent to AV task	Begin sending message to AV task		Press [■ ST on main unit f next error
F893	FLASH ROM IC problem	FLASH ROM IC installed is not operating properly (Neccessary replacement of FLASH ROM IC) or firmw are problem		Press [■ ST on main unit f next error
F894	EEPROM abnormality	EEPROM IC installed is not operating in normal condition (EEPROM contains neccessary data)		Press [■ ST on main unit f next error
F895	Region setting abnormality	Firm version agreement check for factory preset setting failure prevention. Check region setting & re-initialize		Press [■ ST on main unit f next error
F896	No existence model	Firm version agreement check for factory preset setting failure prevention		Press [■ ST on main unit f next error
F897	Initialize is not completed	Initialize completion check for factory preset setting failure prevention		Press [■ ST on main unit f next error
F898	Disagreement of hardware and software	Unsuitable combination of AV DECORDER, SDRAM and FLASH ROM (firmware)		Press [■ ST on main unit f next error

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remark
F8A0	Message command is not appropriate	Begin sending message to AV task		Press [■ ST on main unit f next error

Note:

An error code will be canceled if a power supply is turned OFF.

***1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.**

***2: CEC is the consumer electronic control used for high-level user control of HDMI-connected devices.**

***3: HDCP is the specification developed to control digital audio & video contents transmission for DVI or HDMI connections.**

9.4. Sales Demonstration Lock Function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCKED" is displayed on the unit, and ordinary operation is disabled.

9.4.1. Setting

- Prohibiting removal of disc

1. **Select the DVD/CD function.**
2. **Press and hold down the ■ button and the power button on the player for at least three seconds. (The message, "___LOCKED_" appears when the function is activated.)**

Note:

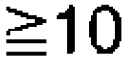
OPEN/CLOSE ⏏, DISC CHECK and DISC CHANGE buttons are invalid and the player displays "___LOCKED_" while the lock function mode is entered.

- Prohibiting operation of selector and disk

1. **Select the DVD/CD function.**
2. **Press and hold down the ▶ button and the power button on the player for at least three seconds. (The message, "___LOCKED_" appears when the function is activated.)**

Note:

The following buttons are invalid and the player displays "___LOCKED_" while the lock function mode is entered.

Player	, , , SELECTOR, , , VOLUME KNOB, DISC CHECI DISC CHANGE, DISC1-DISC5
Remote controller unit	SLEEP, REPEAT, 0~9,  , RETURN, TOP MENU, , , , , , POSITION MEMORY, TUNER/BAND, D.MIX, CH SELECT/ TEST, SET UP/ MUTING, DISPLAY, GROUP, TV, VCR/ AUX, QUICK REPLAY, SUBTITLE, FL DISPLAY, CH & VOLUME

9.4.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOCK" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

9.5. Service Precautions

9.5.1. Recovery after the DVD player is repaired

- When the FLASH ROM IC or HDMI module P.C.B. is replaced, carry out the recovery processing to optimize the drive.
Playback the recovery disk to process the recovery automatically.
- Recovery disc (Product number: RFKZD03R005)
- Performing recovery process
1. Load the recovery disc RFKZD03R005 on to the player and run it.
2. Recovery is performed automatically. When it is finished, a message appears on the screen.
3. Remove the recovery disc.
4. Turn off the power.
5. Initialize the player.

9.5.2. Firmware version-up of the DVD player

- The firmware of the DVD player may be renewed to improve the quality including operability and playability to the substandard discs.processing to optimize the drive.
The recovery disc has also firmware version-up.
- After version-up, recovery processing is executed automatically.
- Part number of the recovery disc for version-up will be noticed when it is supplied.
- Updating firmware
1. Load the recovery disc on to the player and run it.

2. Firmware version of the player is automatically checked. Appropriate message appears whenever necessary.
3. Using remote controller's cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
4. a. If Yes is selected, version updating is performed.
   b. If No is selected, only recovery is performed.
5. a. When updating is finished, remove the disc according to the message appearing on the screen.
   b. Remove the disc according to the message appearing on the screen.
6. Turn off the power.

Note:
If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.
In such a case, replace the FLASH ROM IC and carry out the version-up again.

9.5.3. DVD Module Reset

- When after replacing Flash Rom IC or the DVD Module P.C.B., FL displays error code " DVD F897". This means the unit is not initialized properly and the following process needs to be carry out.

- Procedures:

1. Press ≧10 on remote control while pressing "STOP" button on main unit.
2. FL display show " Initialize"
3. While still pressing "STOP" button on main unit, press "ENTER" on remote control.
4. FL will display "DVD RESET" before FL display will change to TOC reading again.
5. Power off unit. Unplug the AC cord.
6. Power on the unit. It should be no problem. If problem persist check on the DVD module P.C.B. or FLASH ROM IC.

10. Assembling and Disassembling

"ATTENTION SERVICER"

Be careful when disassembling and servicing.

Some chassis components may have sharp edges.
Special Note:

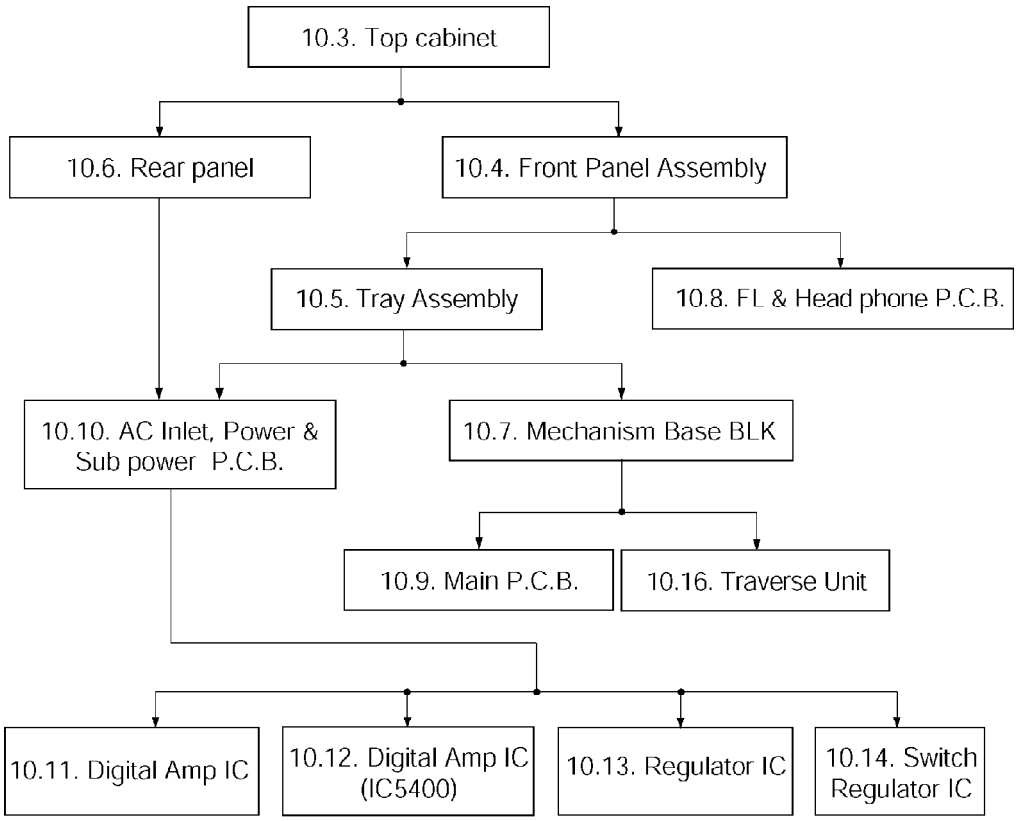
1. **This section describes the disassembly procedures for all the major printed circuit boards and main components.**
2. **Before the disassembly process was carried out, do take special note that all safety precautions are to be carried out.**
   (Ensure that no AC power supply is connected during disassembling.)
3. **For assembly after operation checks or replacement, reverse the respective procedures.**
   Special reassembly procedures are described only when required.
4. **The Switch Regulator IC may have high temperature after prolonged use.**
   Use caution when removing the top cabinet and avoid touching heat sinks located in the unit.
5. **Select items from the following index when checks or replacement are required.**

- **Disassembling the Top Cabinet**
- **Disassembling the Front Panel**
- **Disassembling the Tray Assembly**
- **Disassembling the Rear Panel**
- **Disassembling the Mechanism Base Block**
- **Disassembling the FL & Head phone P.C.B.**
- **Disassembling the Main P.C.B.**
- **Disassembling the AC Inlet, Power & Sub power P.C.B.**
- **Disassembly of Digital Amp IC**
- **Disassembly of Digital Amp IC (IC5400)**
- **Disassembly of Regulator IC**
- **Disassembly of Switch Regulator IC**
- **isassembly of the Tray Base Guide (L) and Tray Base Guide (R)**
- **Disassembly of the Rotary Tray**
- **Disassembly of the Open Lock Gear**
- **Disassembly of the Close Lock Gear**
- **Disassembly of the Tray Motor P.C.B.and Sensor P.C.B.**
- **Disassembly of the Traverse Unit**

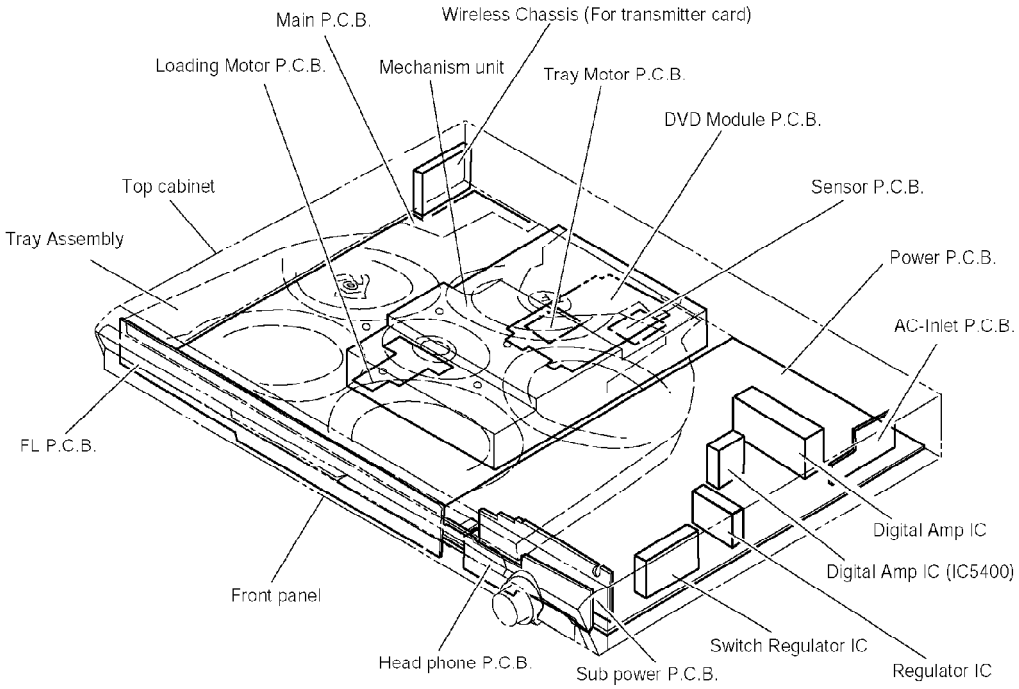
- **Disassembly of the Pulley Gear**
- **Disassembly of the Loading Motor P.C.B.**
- **Disassembly of the Drive Gear (A) & (B)**
- **Disassembly of Fixed Plate, Magnet and Clamper**
- **Disassembly of Cam Gear & Support Piece**
- **Disassembly of the Slide Plate (L) & (R) and Change Lever**
- **Assembly of Tray Assembly**

CAUTION NOTE:
Please use original screw and at correct locations.

10.1. Disassembly Flow Chart


10.3. Top cabinet
10.6. Rear panel
10.4. Front Panel Assembly
10.5. Tray Assembly
10.8. FL & Head phone P.C.B.
10.10. AC Inlet, Power & Sub power P.C.B.
10.7. Mechanism Base BLK
10.9. Main P.C.B.
10.16. Traverse Unit
10.11. Digital Amp IC
10.12. Digital Amp IC (IC5400)
10.13. Regulator IC
10.14. Switch Regulator IC

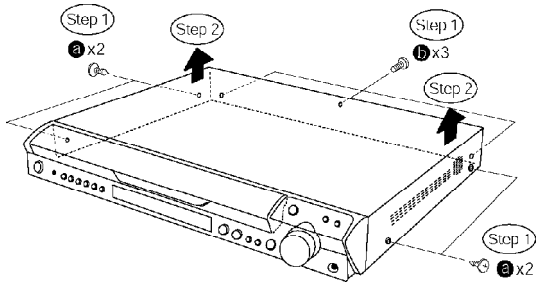
10.2. Main Components and P.C.B. Locations



10.3. Disassembling the Top Cabinet

Step 1 Remove 7 screws.

Step 2 Remove the top cabinet in the direction of arrow.



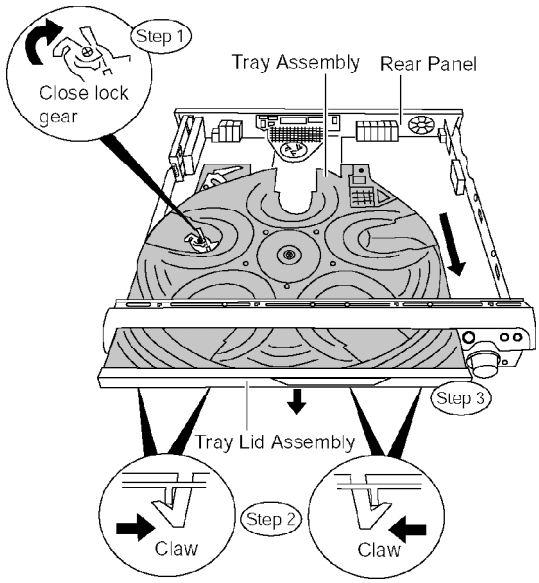
10.4. Disassembling the Front Panel Assembly

- Follow (Step 1) to (Step 2) of Item 10.3.

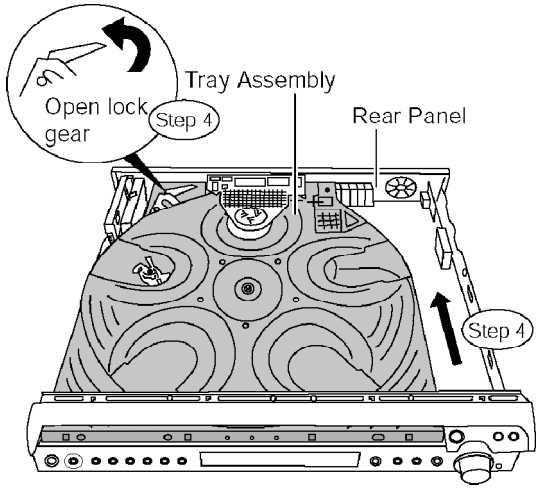
Step 1 Keep the close lock gear pressed in clockwise direction, then move the tray assembly out halfway in the direction of the arrow.

Step 2 Release the claws at the bottom of the tray lid assembly.

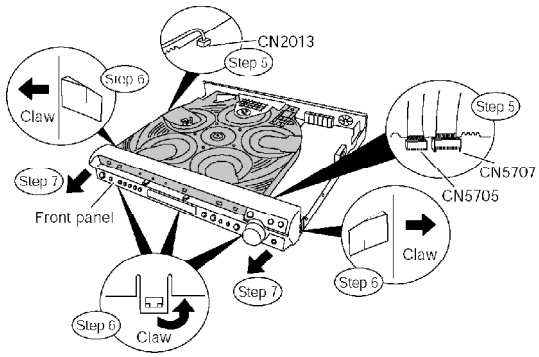
Step 3 Remove the tray lid assembly in the direction of arrow.



Step 4 Keep the open lock gear pressed in anti clockwise direction and push back the tray assembly.



Step 5 Detach the FFC cables from connectors (CN5705, CN5707 & CN2013).
Step 6 Release the claws of the front panel in the directions.
Step 7 Detach the front panel assembly in the direction of arrow.

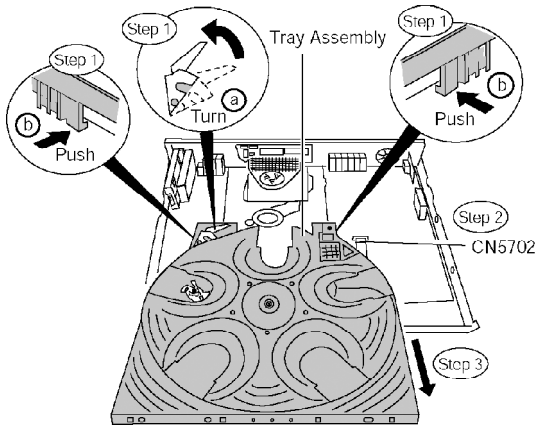


10.5. Disassembling the Tray Assembly

- Follow the (Step 1) to (Step 7) Item 10.4.

Step 1 Press and hold the open lock gear, then push and release the claws in the direction of

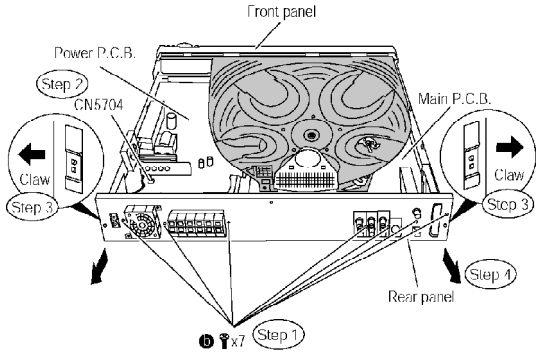
arrow.
Step 2 Detach the FFC cable from connector (CN5702).
Step 3 Remove the tray assembly in the direction of arrow.
Caution: Avoid using excessive strong force when removing the tray assembly.



10.6. Disassembling the Rear Panel

- Follow (Step 1) to (Step 2) of Item 10.3.

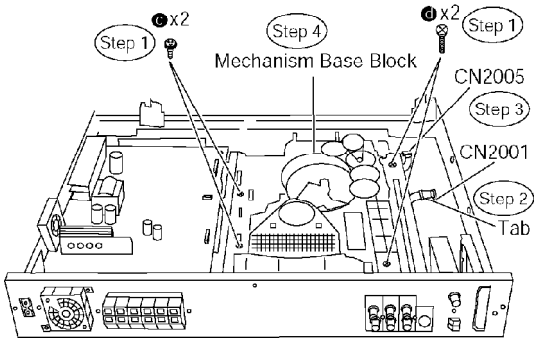
Step 1 Remove 7 screws.
Step 2 Detach the FFC cable from connector (CN5704).
Step 3 Release the claws of the rear panel in the directions.
Step 4 Remove the rear panel in the direction of arrow.



10.7. Disassembling the Mechanism Base

- Follow (Step 1) to (Step 3) Item 10.5.

Step 1 Remove 2 screws on each side of the mechanism base block.
Caution: Take note of the screw type used. During assembling, use the correct screw type and at the correct location.
Step 2 Remove the tab.
Step 3 Detach FFC cables at connectors (CN2005 & CN2001).



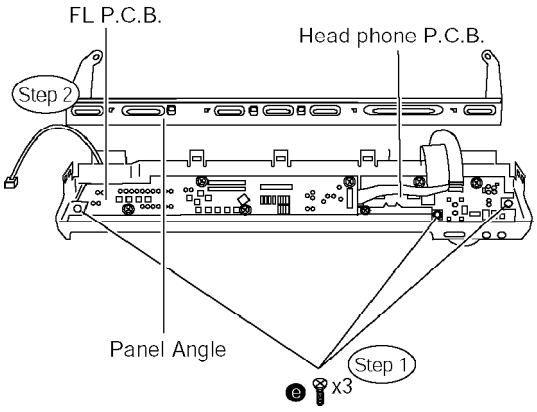
Step 4 Remove the mechanism base block.

10.8. Disassembling the FL & Head phone P.C.B.

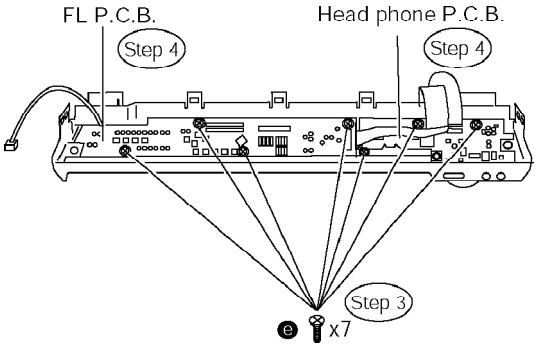
- Follow (Step 1) to (Step 7) Item 10.4.

Step 1 Remove 3 screws.

Step 2 Remove the panel angle.



Step 3 Remove 7 screws.



Step 4 Remove the FL & Head phone P.C.B.

10.9. Disassembling the Main P.C.B.

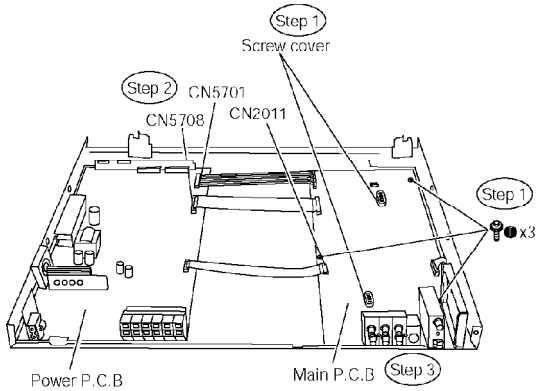
- Follow (Step 1) to (Step 4) of Item 10.6.

- Follow (Step 1) to (Step 4) of Item 10.7.

Step 1 Remove 3 screws and 2 screw covers.

Step 2 Detach the FFC cables from connectors (CN2011, CN5701, CN5708).

Step 3 Remove the Main P.C.B.

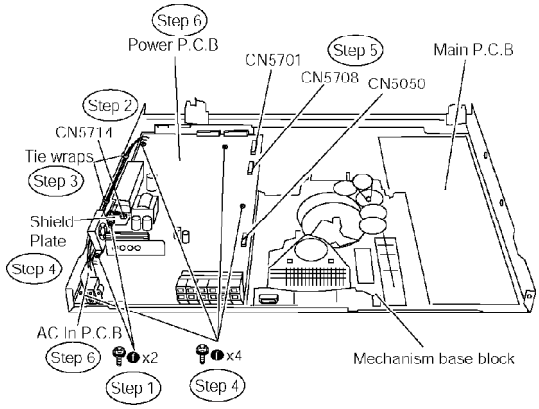


10.10. Disassembling the AC Inlet, Power & Sub power P.C.B

- Follow the (Step 1) to (Step 4) of Item 10.6.

- Follow the (Step 1) to (Step 4) of Item 10.7.

Step 1 Remove 2 screws. (side fan unit)
Step 2 Detach fan unit. (CN5714)
Step 3 Remove the 2 tie wraps (used for black/white wires between AC Inlet P.C.B. and Power P.C.B.) to the side of bottom chassis.
Step 4 Remove shield plate.
Step 5 Remove 4 screws.
Step 6 Detach the FFC cables from connectors (CN5701, CN5708, CN5050).
Step 7 Remove the AC Inlet, Power & Sub power P.C.B.

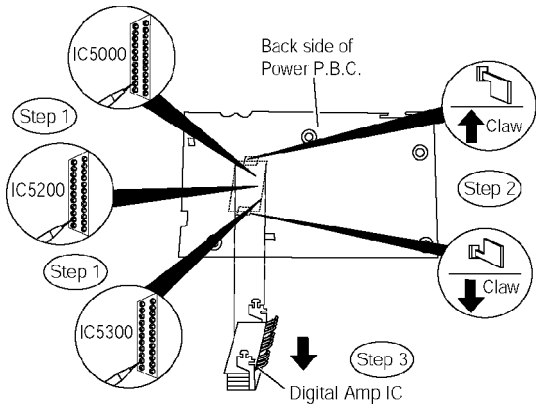


Caution: Remember to use tie wraps to tie the black/red wires to the side of bottom chassis after repair or troubleshooting.

10.11. Disassembly of Digital Amp IC

- Follow (Step 1) to (Step 7) of Item 10.10.

Step 1 Desolder all IC5000, IC5200, IC5300 pins.
Step 2 Release the claws.
Step 3 Remove the D. Amp IC (IC5400).

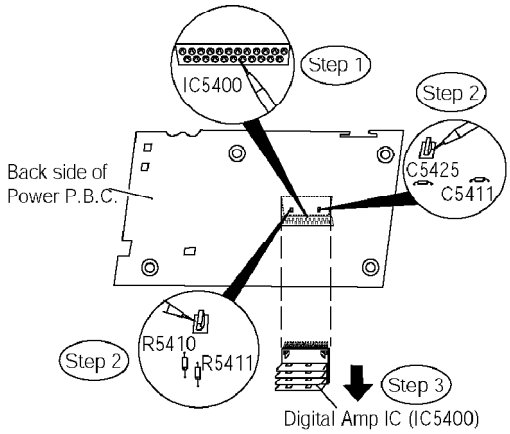


Note: Refer to the diagrams of Power P.C.B. (Section 19.3) for location of the parts.

10.12. Disassembly of Digital Amp IC (IC5400)

- Follow (Step 1) to (Step 7) of Item 10.10.

Step 1 Desolder all pins of IC5400.
Step 2 Desolder 2 pins of Heat Sink B.
Step 3 Remove the Digital Amp IC (IC5400).

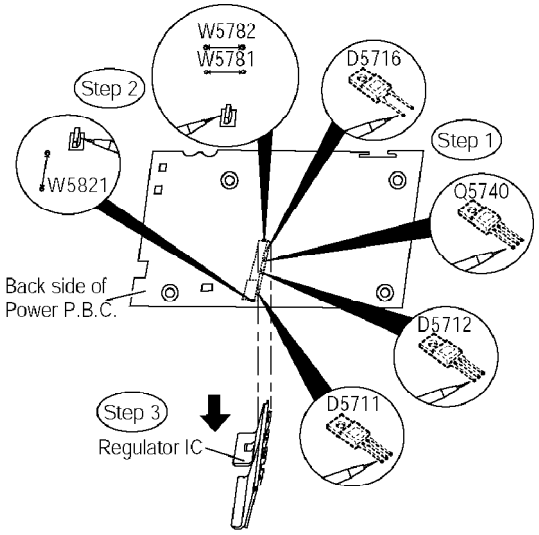


Note: Refer to the diagrams of Power P.C.B. (Section 19.3) for location of the parts.

10.13. Disassembly of Regulator IC

- Follow (Step 1) to (Step 7) of Item 10.10.

Step 1 Desolder all pins of D5711, D5716, D5717, D5718.
Step 2 Desolder 2 pins of Regulator IC.
Step 3 Remove the Regulator IC.

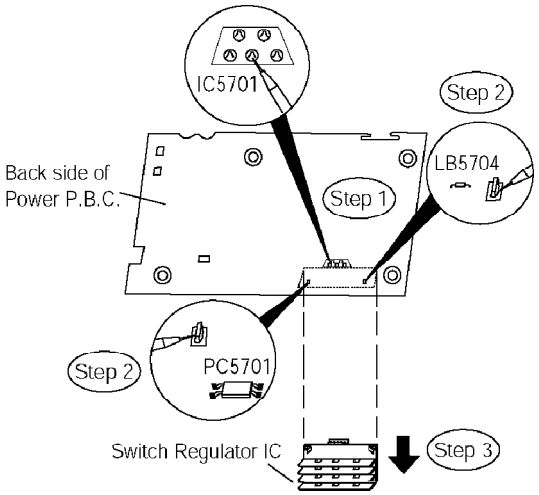


Note: Refer to the diagrams of Power P.C.B. (Section 19.3) for location of the parts.

10.14. Disassembly of Switch Regulator IC (IC5701)

- Follow (Step 1) to (Step 6) of Item 10.11.

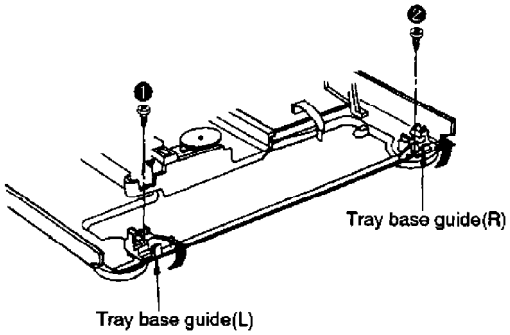
Step 1 Desolder all pins of IC5701.
Step 2 Desolder 2 pins of Switch Regulator IC.
Step 3 Remove the Switch Regulator IC.



Note: Refer to the diagrams of Power P.C.B. (Section 19.3) for location of the parts.
Caution: Be careful when removing the Switch Regulator IC which has high temperature after prolonged use.

10.15. Disassembly of the Tray Base Guide (L) and Tray Base Guide (R)

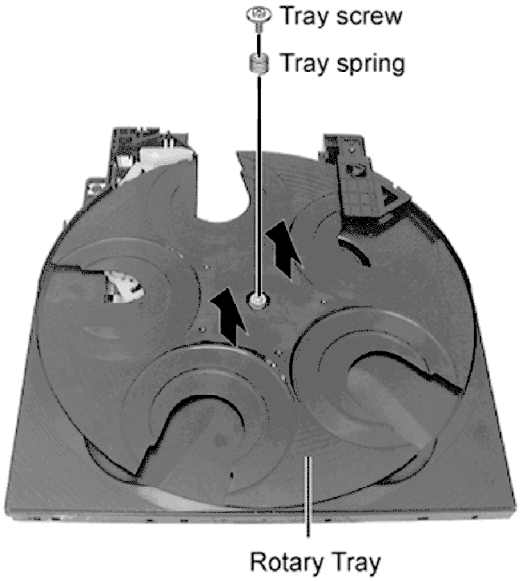
- Follow (Step 1) to (Step 3) of Item 10.5.



Step 1 Remove the 2 screws.
Step 2 Remove the tray base guide (L) and tray guide (R) in the direction of arrow.

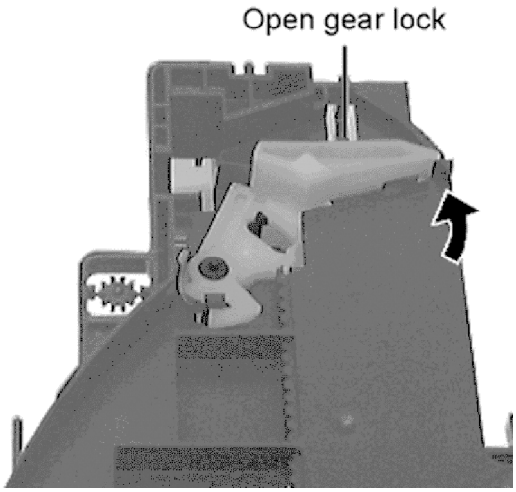
10.16. Disassembly of the Rotary Tray

- Follow (Step 1) to (Step 3) of Item 10.5.

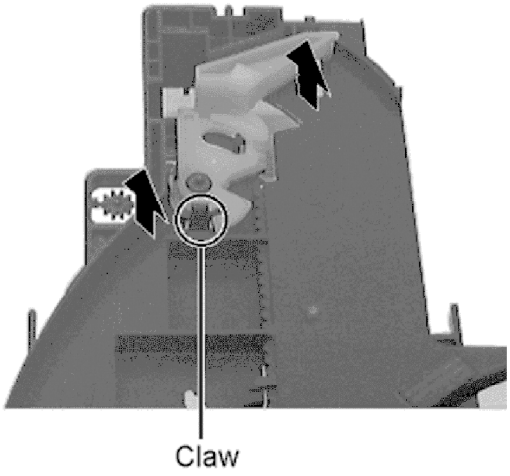


Step 1 Remove tray screw and tray spring.
Step 2 Remove rotary tray.

10.16.1. Disassembly of the Open Lock Gear



Step 1 Rotate open lock gear in the direction of arrow. (Anti-clockwise)

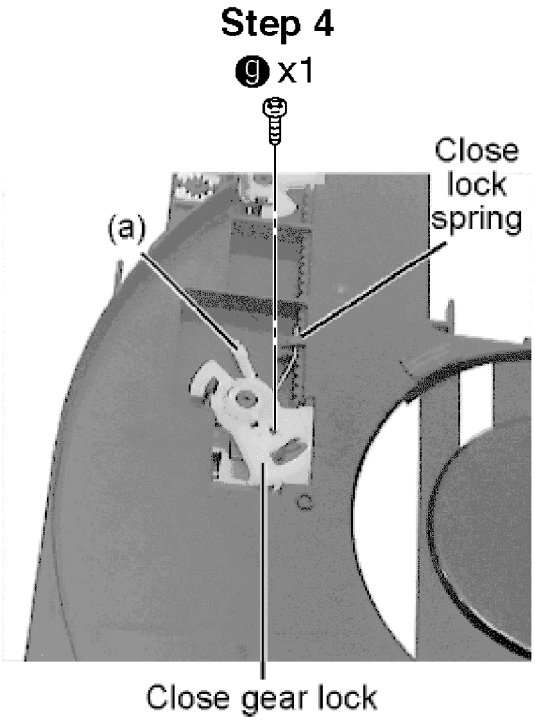


Step 2 Release claw of open lock gear, remove open lock gear in the direction of arrow.

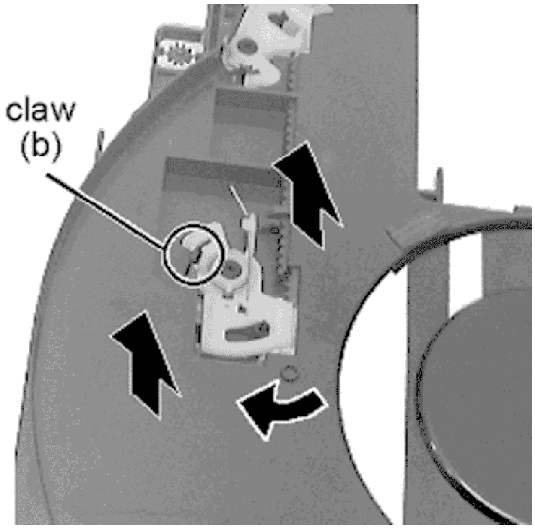
10.16.2. Disassembly of the Close Lock Gear

- Follow (Step 1) to (Step 3) of Item 10.5.

Step 1 Remove 1 screw.



Step 2 Hook close lock spring to claw (a).

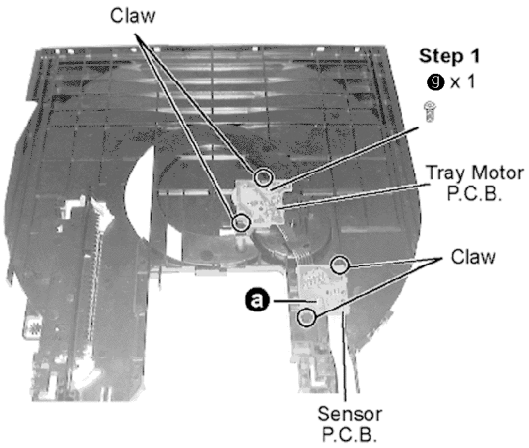


Step 3 Rotate close lock gear to direction of arrow, press claw (b) and pull out close lock gear.

10.16.3. Disassembly of the Tray Motor P.C.B. and Sensor P.C.B.

- Follow (Step 1) to (Step 3) of Item 10.5.

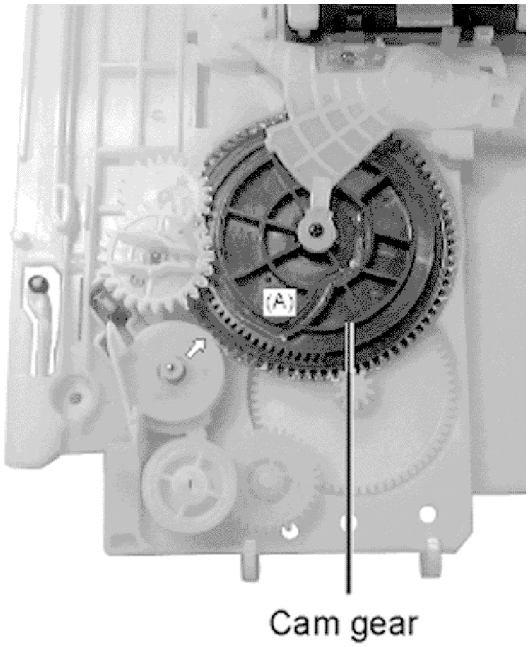
Step 1 Remove 2 screws.



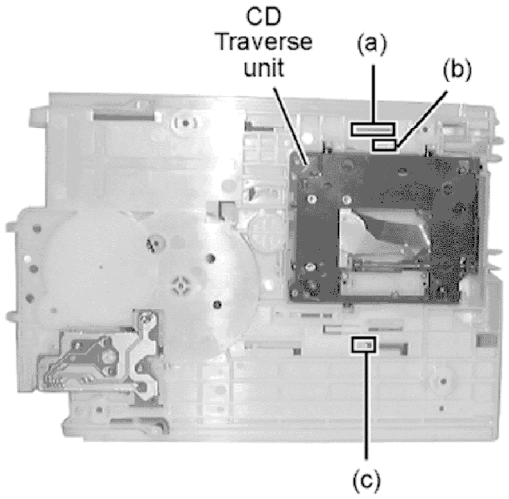
Step 2 Release 4 claws at Tray Motor P.C.B. and Sensor P.C.B.

10.17. Disassembly of the Traverse Unit

Step 1 Rotate cam gear anti-clockwise. (Align at position (A) as marking on gear with arrow)



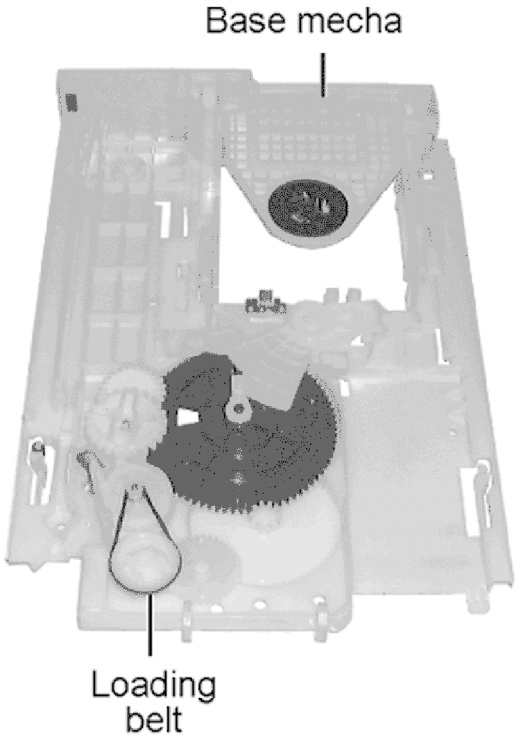
Step 2 Flip the base mecha unit in vertical position.



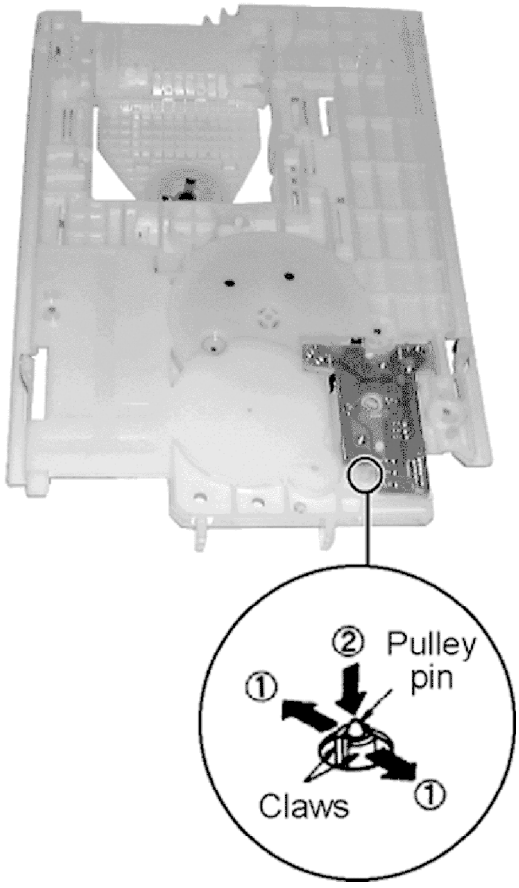
Step 3 Press upward (a), push backward (b) and press to left (c) to release CD traverse unit.

10.17.1. Disassembly of the Pulley Gear

Step 1 Remove of the loading belt.



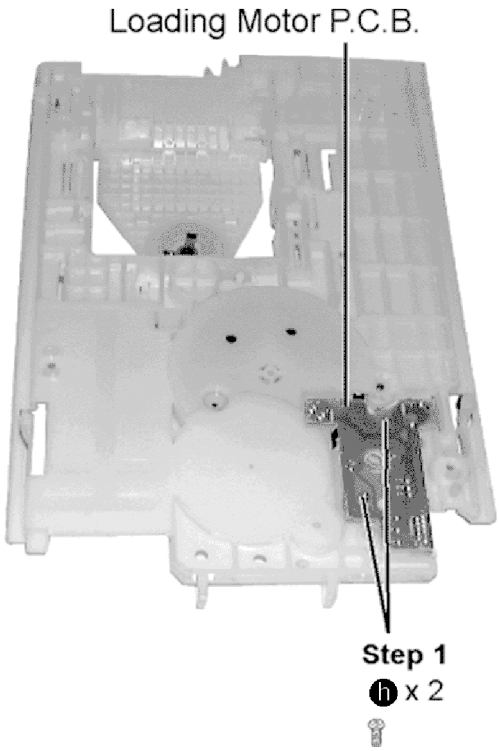
Step 2 Flip the base mecha.



Step 3 Release the 2 claws in the direction of arrow (1), and then push the pulley pin in the direction of arrow (2).

10.17.2. Disassembly of the Loading Motor P.C.B.

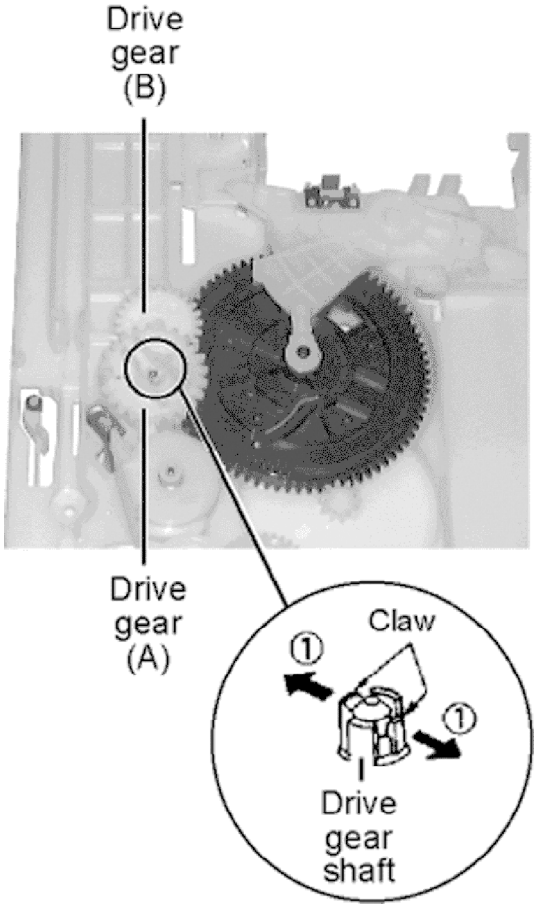
Step 1 Remove 2 screws.



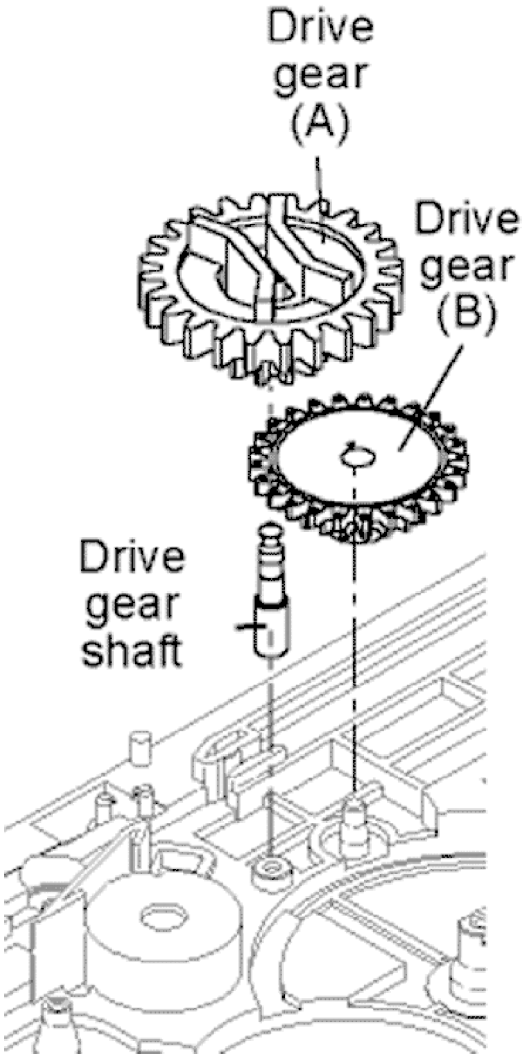
Step 2 Remove Loading Motor P.C.B.

10.17.3. Disassembly of the Drive Gear (A) & (B)

Step 1 Release the claw in the direction of arrow (1), and then push drive gear shaft up.

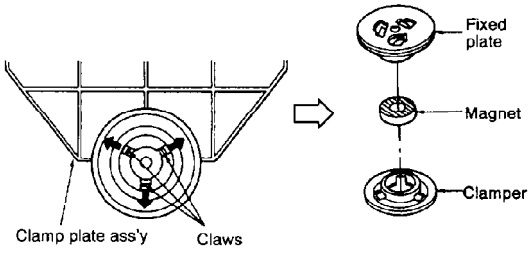


Step 2 Remove Drive Gear (A) and Drive Gear (B).



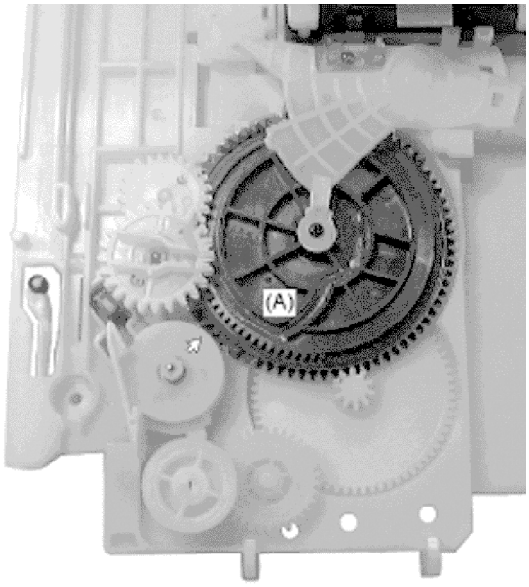
10.17.4. Disassembly of Fixed Plate, Magnet and Clamper

Release 3 claws in the direction of arrow.

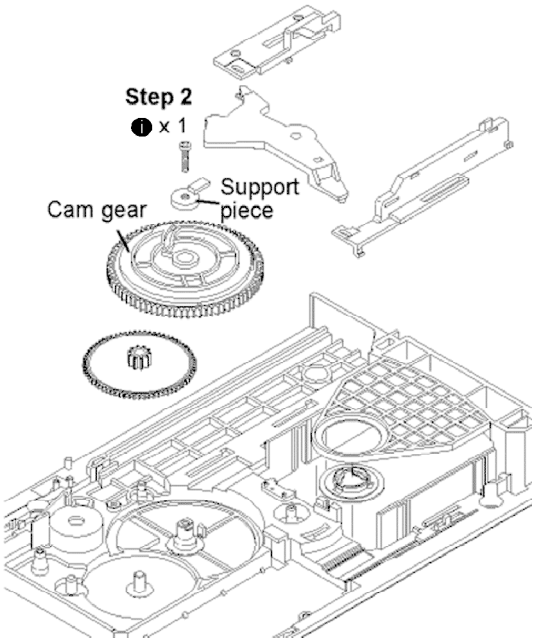


10.17.5. Disassembly of Cam Gear & Support Piece

Step 1 Rotate (A) in cam gear anti-clockwise.

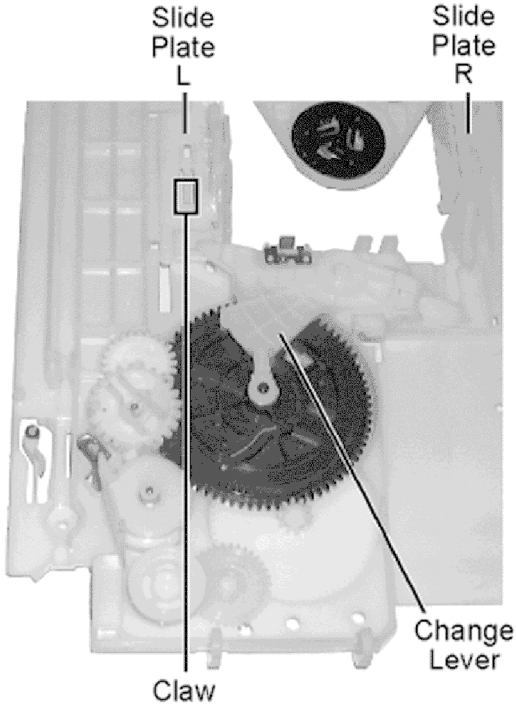


Step 2 Remove 1 screw and support piece.

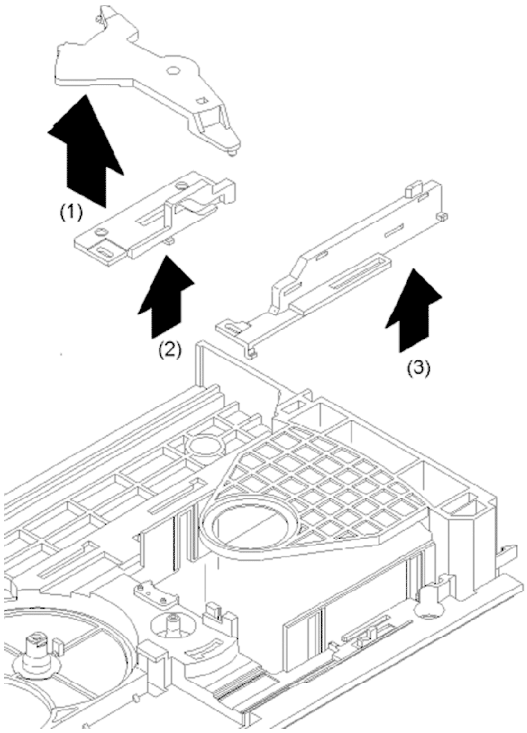


10.17.6. Disassembly of the Slide Plate (L) & (R) and Change Lever

Step 1 Press the claw and push the Slide Plate (L) up.

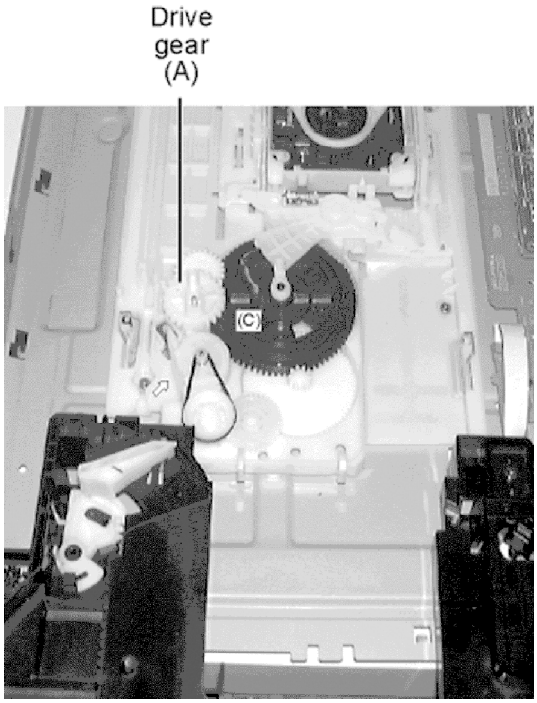


Step 2 Remove slide plate (L) & (R) and change lever as arrow shown.

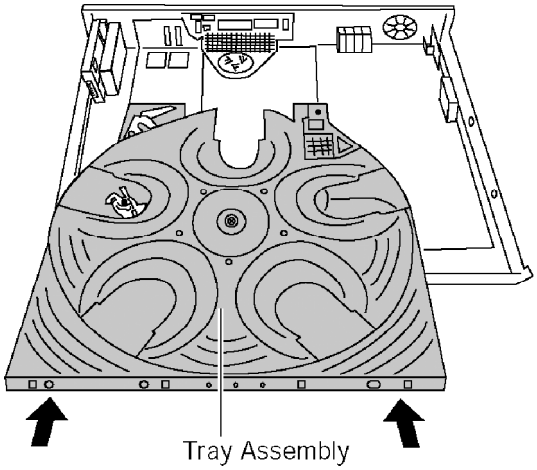


10.18. Assembly of Tray Assembly

Step 1 Rotate cam gear anti-clockwise. Align at position (C) as marking on gear with arrow.



Step 2 Make sure drive gear (A) at vertical position.



Step 3 Push tray assembly to the direction of arrow shown.

11. Service Fixture and Tools

Prepare service tools before proccess service position.

Service Tools	
Loading Motor P.C.B. - Main P.C.B.	**REEX0633 (11 pin)**
Sensor P.C.B. - Power P.C.B.	**REEX0465 (11 pin)**

12. Service Positions

12.1. Checking & Repair Main P.C.B., Power P.C.B., FL and Head

phone P.C.B.

- Follow the Item 10.5.

- Follow the (Step 1) - (Step 4) of Item 10.6.

- Follow the (Step 1) - (Step 2) of Item 10.7.

- Follow the (Step 1) - (Step 3) of Item 10.8.

- Follow the (Step 1) - (Step 3) of Item 10.10.

- Follow the (Step 1) - (Step 3) of Item 10.11.

Step 1 Change cable (REEX0524) to extended cable (REEX0633) .

Step 2 Change cable (REZ1483) to extended cable (REEX0465) .

Step 3 Connect all the cables.

Step 4 Connect 2 fans.

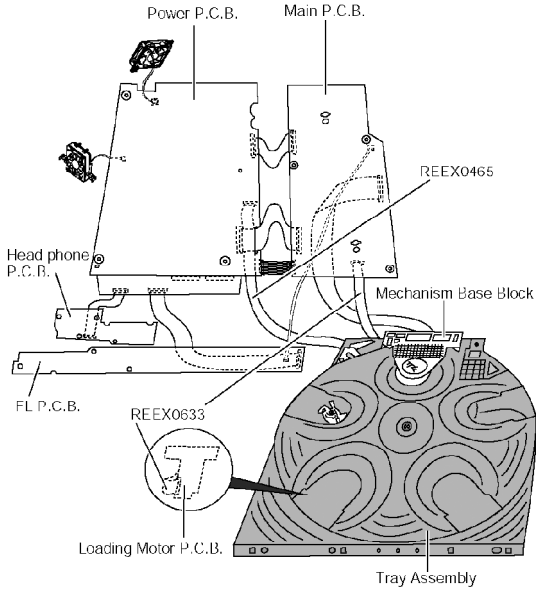
Step 5 Turn over Power P.C.B., Main P.C.B., FL P.C.B. and Head phone P.C.B.

Step 6 Position mechanism base block and tray assembly in horizontally.

Step 7 Connect the AC cord and switch on the power.

Step 8 Insert CD into tray assembly.

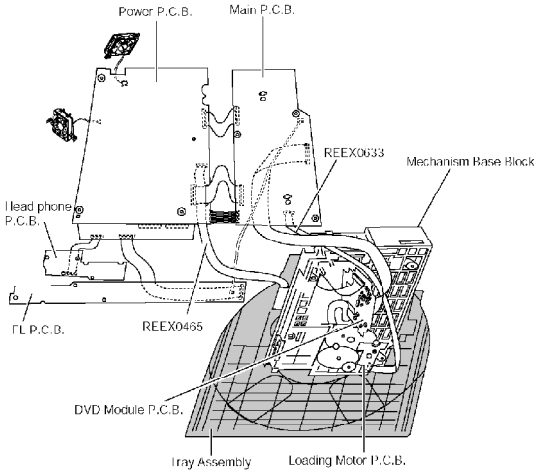
Step 9 Press DISC SELECTOR button to lock the CD. For example, press “1” of “5 DISC SELECTOR” if the CD is placed at the first tray.



12.2. Checking & Repair DVD Module P.C.B

- Follow the Item 12.1.

Step 1 Remove 4 screws of DVD module P.C.B.



13. Measurements and Adjustments

13.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S20 [SPG]
	TORX screw driver (T6)	Available on sales route. (T6) or RFKZ0185 [SPG]
Others	Grease	RFKXPG641 [SPG]
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD03R005 [SPG]

13.2. Important points in adjustment

13.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.

- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit

2. Spindle motor unit

3. Optical pickup peripheral parts

Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment is generally unnecessary after replacing the traverse unit.

13.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this manual.

13.3. Storing and handling of test discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. **Do not place discs directly onto the workbench, etc., after use.**
2. **Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.**
3. **Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.**
4. **If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.**

13.4. Optical adjustment

13.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T30 (center periphery) T43 (outer periphery) play	DVDT-S20 [SPG]
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

13.4.1.1. Adjustment procedure

1. **While pressing STOP button on the main unit, press "5" on the remote control unit.**
2. **Confirm that "J_xxx/yyy_zz" (display1/display2) is shown on the front display.**

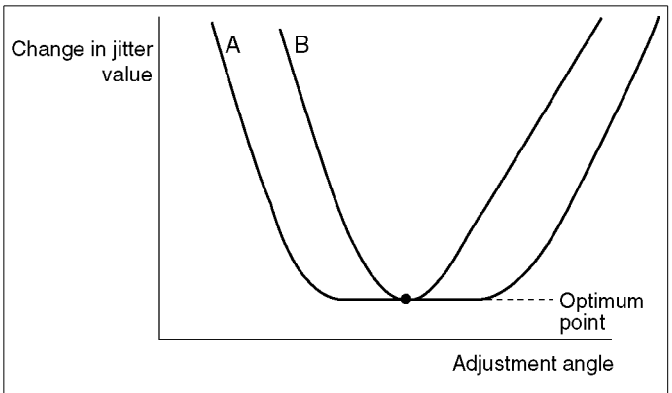
For your information:
"yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

Note:
Jitter value appears on the front display.

3. **Play test disc T30 (center periphery).**
4. **Adjust tangential adjustment screw so that the jitter value is minimized.**
5. **Play test disc T30 (center periphery).**
6. **Adjust tilt adjustment screw 1 so that the jitter value is minimized.**
7. **Play test disc T30 (center periphery).**
8. **Adjust tilt adjustment screw 2 so that the jitter value is minimized.**
9. **Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.**

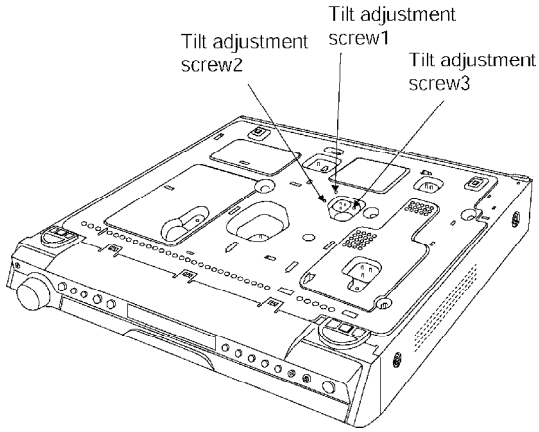
13.4.1.2. Important points

1. **Make tangential adjustment first, and then make tilt adjustment.**
2. **Repeat adjusting two or three times to find the optimum point.**
3. **Finish the procedure with tilt adjustment.**



Jitter value depends on the model:

1. If the jitter value changes like B, the optimum point is easy to find.
2. If the jitter value changes like A, set the optimum point near the middle.

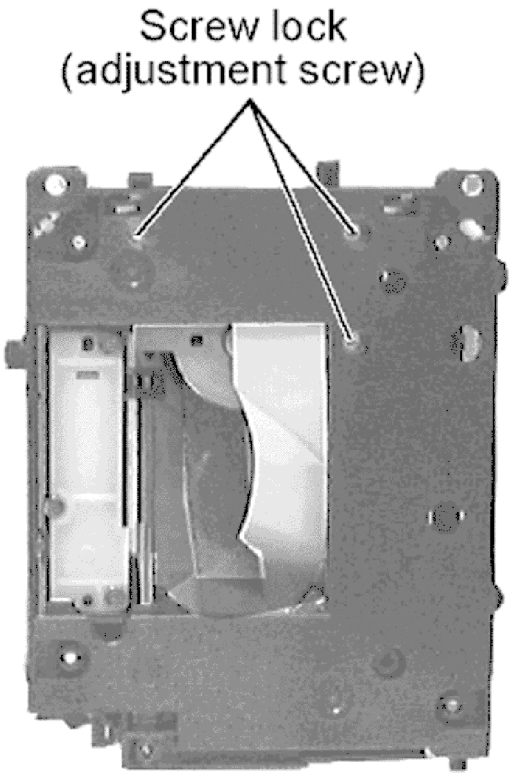


13.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

13.4.1.4. Procedure for screw lock

1. **After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.**
2. **Lay the traverse unit upside down, and fix adjustment screw with screw lock.**
3. **After fixing, reassemble traverse unit, clamper base, tray and top cover.**



13.5. Abbreviations

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVO AMP OUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCK SELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIP SELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT

INITIAL/LOGO		ABBREVIATIONS
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUT0~UP	DATA OUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/ 40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED
	FEO	INPUT
	FG	FOCUS ERROR AMP OUTPUT
	FSC	FREQUENCY GENERATOR
	FSCK	FREQUENCY SUB CARRIER
		FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE

INITIAL/LOGO		ABBREVIATIONS
I	IECOUT	IEC958 FORMAT DATA OUTPUT
	IPFRAG	
	IREF	INTERPOLATION FLAG
	ISEL	I (CURRENT) REFERENCE
		INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND CLOCK
	MDATA	MEMORY SERIAL COMMAND DATA
	MDQ0~UP	MEMORY DATA INPUT/OUTPUT
	MDQM	MEMORY DATA I/O MASK
	MLD	MEMORY SERIAL COMMAND LOAD
	MPEG	MOVING PICTURE EXPERTS GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE DIFFERENCE
	PCK	PLL CLOCK
	PDVD	DVD TRACKING PHASE DIFFERENCE
	PEAK	CAP. FOR PEAK HOLD
	PLLCLK / PLLOK	CHANNEL PLL CLOCK PLL LOCK
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVE MOTOR DRIVE A
	PWMOA, B	PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	RF POLARITY SELECT
	RST	RESET
	RSV	RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECT CLOCK
	SEN	SERIAL PORT ENABLE
	SIN1, 2	SERIAL DATA IN
	SOUT1, 2	SERIAL DATA OUT
	SPDI	SERIAL PORT DATA INPUT
	SPDO	SERIAL PORT DATA OUTPUT
	SPEN	SERIAL PORT R/W ENABLE
	SPRCLK	SERIAL PORT READ CLOCK
	SPWCLK	SERIAL PORT WRITE CLOCK
	SQCK	SUB CODE Q CLOCK
	SQCX	SUB CODE Q DATA READ CLOCK
	SRDATA	SERIAL DATA
	SRMADR	SRAM ADDRESS BUS
	SRMDT0~7	SRAM DATA BUS 0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAM DATA CLOCK
	STD0~UP	STREAM DATA
	STENABLE	STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY SELECT
	STVALID	STREAM DATA VALIDITY
	SUBC	SUB CODE SERIAL
	SBCK	SUB CODE CLOCK
	SUBQ	SUB CODE Q DATA
	SYSCLK	SYSTEM CLOCK

		SYSTEM CLOCK

INITIAL/LOGO		ABBREVIATIONS
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSS SIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWER SUPPLY VOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER

INITIAL/LOGO		ABBREVIATIONS
X	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPT REQUEST
	XI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIP SELECT
	XVDS	X V-DEC CONTROL BUS
	XVSYNCO	STROBE
		X VERTICAL SYNC OUTPUT

14. Voltage and Waveform Chart

14.1. DVD Module P.C.B.

14.2. Main P.C.B.

14.3. Power P.C.B.

14.4. FL P.C.B.

14.5. Loading P.C.B., Tray Motor P.C.B., Sensor P.C.B.

14.6. Waveform Chart

15. Illustration of IC's, Transistors and Diodes

16. Wiring Connection Diagram

17. Block Diagram

18. Schematic Diagram

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S6801:

Play and memory switch (Memory).

S6802:

R. skip, search and Tuning switch (/ / TUNING).

S6803:

F. skip, search and Tuning switch (/ / TUNING).

S6804:

Stop and TUNE mode switch (TUNE MODE). /

Pause and FM mode switch (FM MODE).

S6808:

Tray open / close switch (Open / Close).

S6806:

Disc skip switch (DISC SKIP).

S6805:

Disc exchange switch (DISC EXCHANGE).

S6900:

Standby / on switch (POWER).

S6907:

Source select switch (SELECTOR).

S6902-S6906:

Disc switch (DISC1-DISC5).

S6901:

CD mode switch [PARTY MODE].

VR6800:

Volume control.

- **Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.**
- **Important safety notice:**
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacturer´s specified parts shown in the parts list.
- **The supply part number is described alone in the replacement parts list.**
- **Voltage and signal line**

: +B Signal line

: CD-DA signal line

: Main signal line

: DVD (Video) signal line

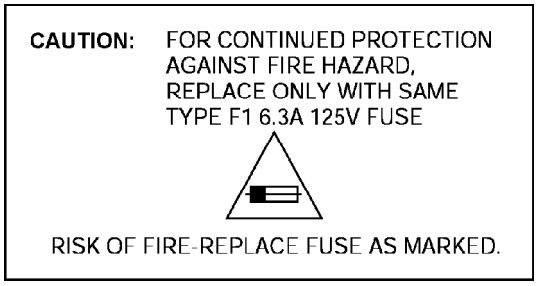
: DVD (Audio) signal line

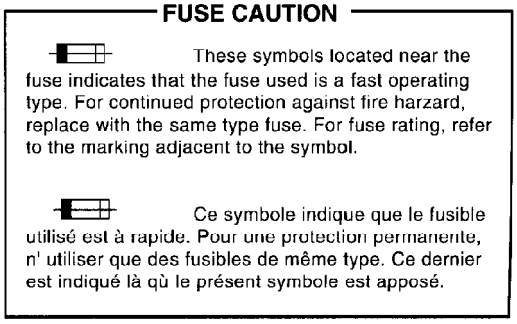
: FM/AM signal line

: -B Signal line

Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
Cover the parts boxes made of plastics with aluminum foil.
Ground the soldering iron.
Put a conductive mat on the work table.
Do not touch the legs of IC or LSI with the fingers directly.


CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 6.3A 125V FUSE
RISK OF FIRE-REPLACE FUSE AS MARKED.


FUSE CAUTION
These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.
Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

18.1. (A) DVD Module Circuit

18.2. (B) Main Circuit

18.3. (C) Power Circuit

18.4. (D) FL and Headphone Circuit

18.5. (E) Loading motor, Tray motor, Sensor Circuit

19. Printed Circuit Board

19.1. (A) DVD Module P.C.B.

19.2. (B) Main, AC-Inlet, Sub-power P.C.B.

19.3. (C) Power P.C.B.

19.4. (D) FL, Headphone, Loading motor, Tray motor, Sensor P.C.B.

20. Basic Troubleshooting Guide

20.1. Basic Troubleshooting Guide for DVD Module

20.1.1. Firmware and Key Download

20.1.2. Initialisation and playability

20.2. Basic Troubleshooting Guide for Traverse Unit

21. Overall Block Diagram for HT440

21.1. SC-HT440 DVD Unit Block Diagram

21.2. HT440 Block Diagram (Analog Signal : DVD 5.1ch Play Back Mode)

21.3. HT440 Block Diagram (Analog Signal : 2ch Analog Input Mode)

22. Terminal Function of ICs

22.1. IC2001 (MN101C49GHG): Micro-processor IC

Pin No.	Terminal Name	I/O	Function
1	AVSS	-	Power supply for A/D converter (GND)
2	KEY1	I	Key 1 line input
3	KEY2	I	Key 2 line input
4	DES1	I	Tuner region setting
5	DES2	I	Model code Digit 1
6	DES3	I	DVD region setting
7	DISC SENSE	I	Disc sensor (RC1)
8	DES4	I	Model code Digit 2
9	DES5	I	Model code Digit 3
10	VREF+	-	+ Power supply for A/D converter
11	VCC	-	Power supply (5V)
12	XOUT	-	Main clock output (8MHz)
13	XIN	-	Main clock input (8MHz)
14	VSS	-	GND (0V)
15	VSS	-	GND (0V)
16	N.C	-	No connection
17	VSS	-	GND (0V)
18	DVD_ PCONT	O	DVD module power control
19	RF_DET (WM_DET)	I	RF module detection - wireless ready

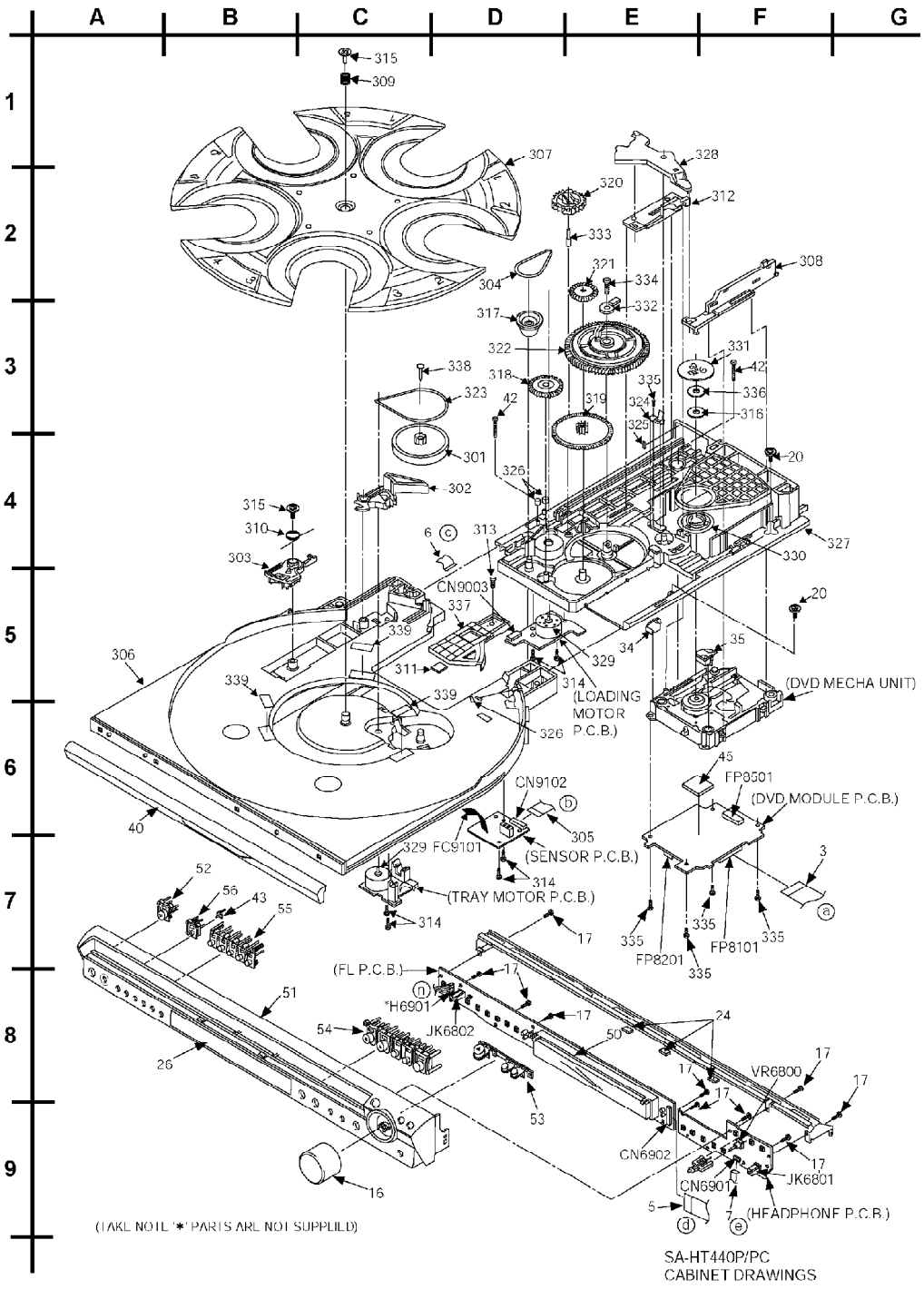
Pin No.	Terminal Name	I/O	Function
20	RF_LINK WM_LINK	I	RF link control - wireless ready
21	RF_PCNT (WM_UNMUTE)	O	RF power control (No connection)
	PX_DA	I	PX-FW2 data
22	N.C	-	No connection
23	EDA	I/O	EEPROM data
24	ECK	O	EEPROM clock
25	ECS	O	EEPROM latch
26	RMT	I	REMOCON input
27	HOTPLUG	I	HDMI interrupt 1
28	CEC_IN	I	HDMI interrupt 2
29	POS_SW	I	Position sensor (RC1)
30	PULSE	I	Pulse sensor speed detection (RC1)
31	SYNC	I	AC failure detect input
32	VSS/VPP	-	GND (0V)
		-	Power supply (Flash Micom only)
33	RESET	I	System reset / PX-FW2 reset
34	PWM	O	Pulse width modulation
35	AM_BP	O	AM beat proof
36	TU_SCL (PLL_CK)	O	Tuner clock
37	TU_SDA (PLL_DA)	O	Tuner data
38	TU_SD	I	Tuner signal detect
39	ST/DO (TU_ST)	I	Stereo indicator / data (Tuner to Opecon)
40	FM_DET	I	Tuner FM detect (Tuner to Opecon)
41	VPP	-	Power supply (Flash Micom only)
42	DVD_CMD	O	DVD Command (Opecon to syscon)
43	DVD_STA	I	DVD status (Syscon to Opecon)
44	DVD_CK	I	DVD clock (Syscon to Opecon)
45	MUTE_ DVD	I	DVD mute (Syscon to Opecon)
46	CHG_DIR (ROLE_CH)	O	Wireless module change direction (Tx/Rx)

Pin No.	Terminal Name	I/O	Function
47	RMPORT_ DET	I	Rear M.Port detect
48	ASP_DA	O	ASP data (R2S15203FP)
49	ASP_CK	O	ASP clock (R2S15203FP)
50	MUTE_HP	O	Headphone mute
51	MP_SEL (SELECT_ A)	O	Select front MPort or rear MPort
52	SUB_ LIMITER	O	Subwoofer frequency Limiter
53	VMUTE	O	Video mute control
54	N.C	-	No connection
55	WIDE_ SURR	O	Surround Enhancer
56	CEC_OUT	I	Output port for HDMI
57	WS_EN	I	Surround Enhancer Enable
58	N.C	-	No connection
59	REG1	I	Speaker protection (For Latin America)
60	MODEL_ SEL1	I	Model selector 1
61	MODEL_ SEL2	I	Model selector 2
62	HB_EN	I	H.Bass enable (H=Enable, L= Disable)
63	N.C	-	No connection
64	MOD_DA	O	Digital amplifier standby control
65	HOP_DA (FHOP)	O	Digital Amp frequency hop control
66	MUTE_ FSUB	O	Front / subwoofer mute
67	N.C	-	No connection
68	MUTE_SC	O	Surround / centre mute
69	LOAD (CAM_SW)	I	UP / DOWN switch (RC1)
70	OPEN_SW	I	OPEN switch (RC1)
71	PCONT	O	Relay power control (System)
72	N.C	-	No connection
73	N.C	-	No connection
74	N.C	-	No connection
75	N.C	-	No connection
76	N.C	-	No connection

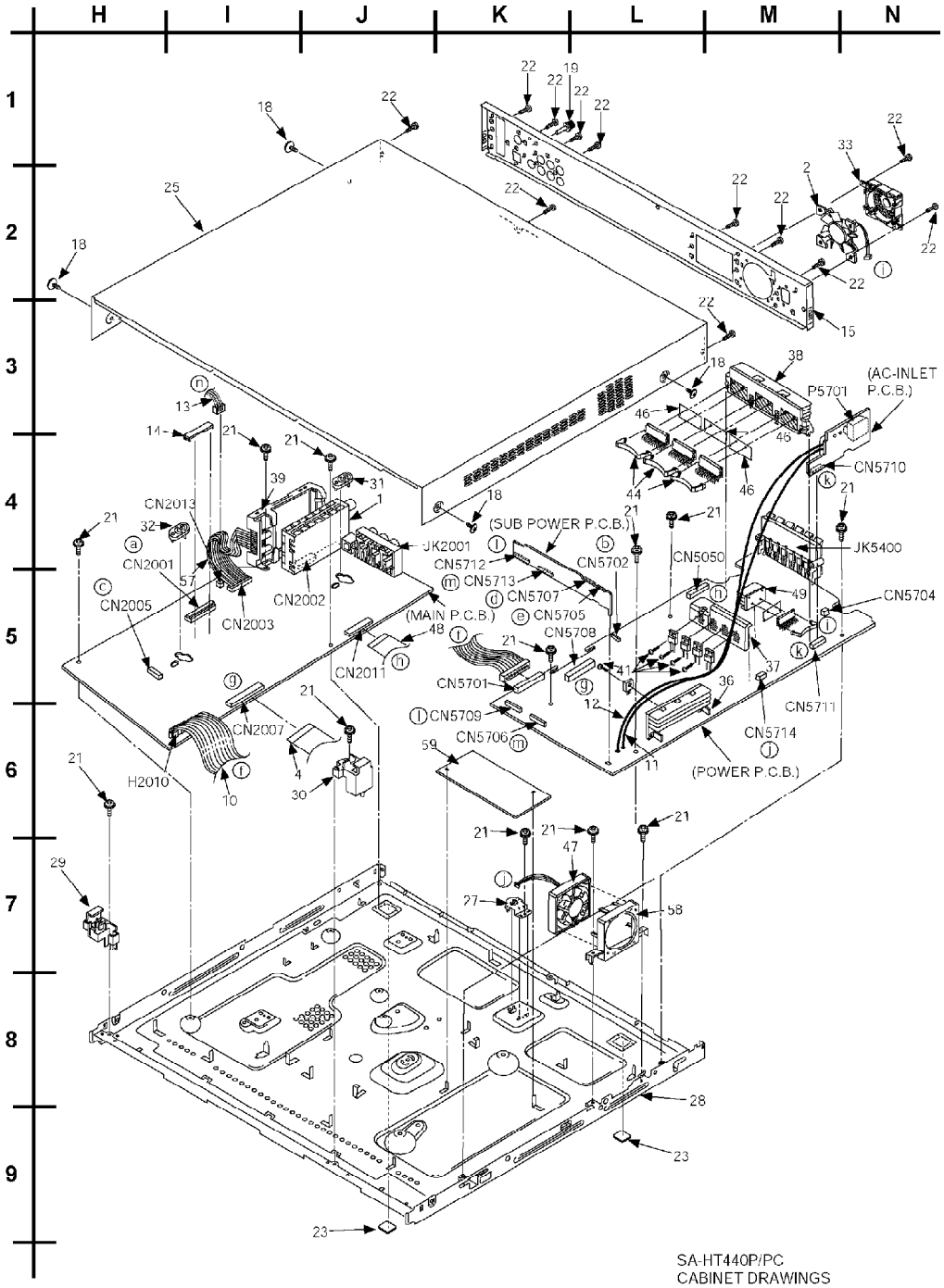
Pin No.	Terminal Name	I/O	Function
77	N.C	-	No connection
78	N.C	-	No connection
79	N.C	-	No connection
80	N.C	-	No connection
81	DC_DET	I	DC detection (System)
82	DISC1_ / LED	O	Disc LED 1
83	WS_LED	O	Wide surround LED
84	N.C	-	No connection
85	N.C	-	No connection
86	N.C	-	No connection
87	FLD_STB	-	FL driver strobe
88	N.C	-	No connection
89	FL_CK	O	FL driver clock
90	FL_DAT	O	FL driver data
91	JOG_A	I	Volume jog signal A
92	JOG_B	I	Volume jog signal B
93	JOG_LED	O	VOlume jog LED (For HT1040)
94	LOAD_ / REV	O	Loading motor control (Open / close-RC1)
95	VSS	-	-ve Power supply for D/A converter
96	LOAD_ / FWD	O	Loading motor control (Open / close-RC1)
97	TURN_ / FWD	O	Tray motor control (Turn-RC1)
98	TURN_ / REW	O	Tray motor control (Turn-RC1)
99	N.C	-	No connection
100	VDD	-	+ve Power supply for D/A converter

23. Explode Views

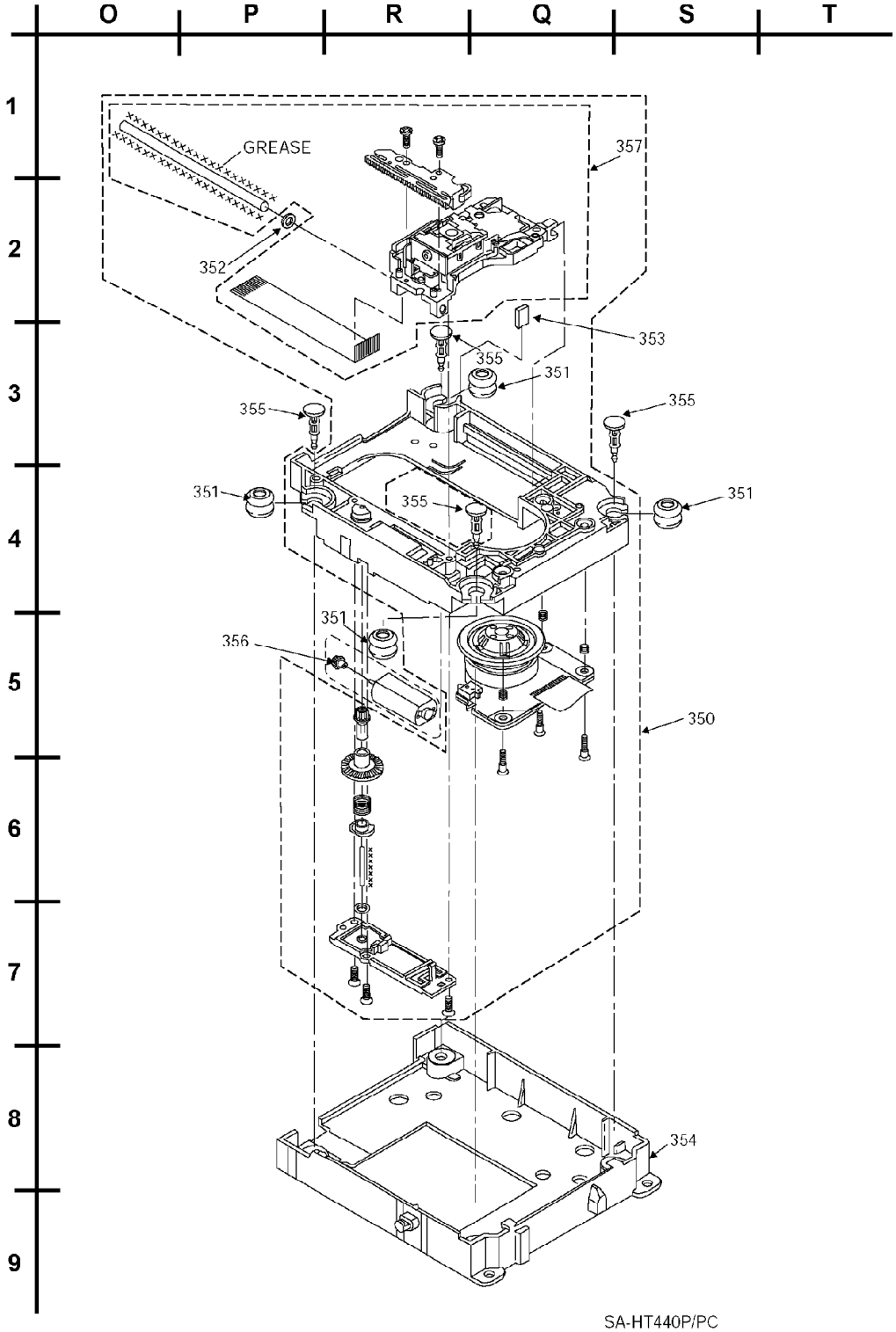
23.1. Cabinet Parts Location



SA-HT440P/PC
CABINET DRAWINGS

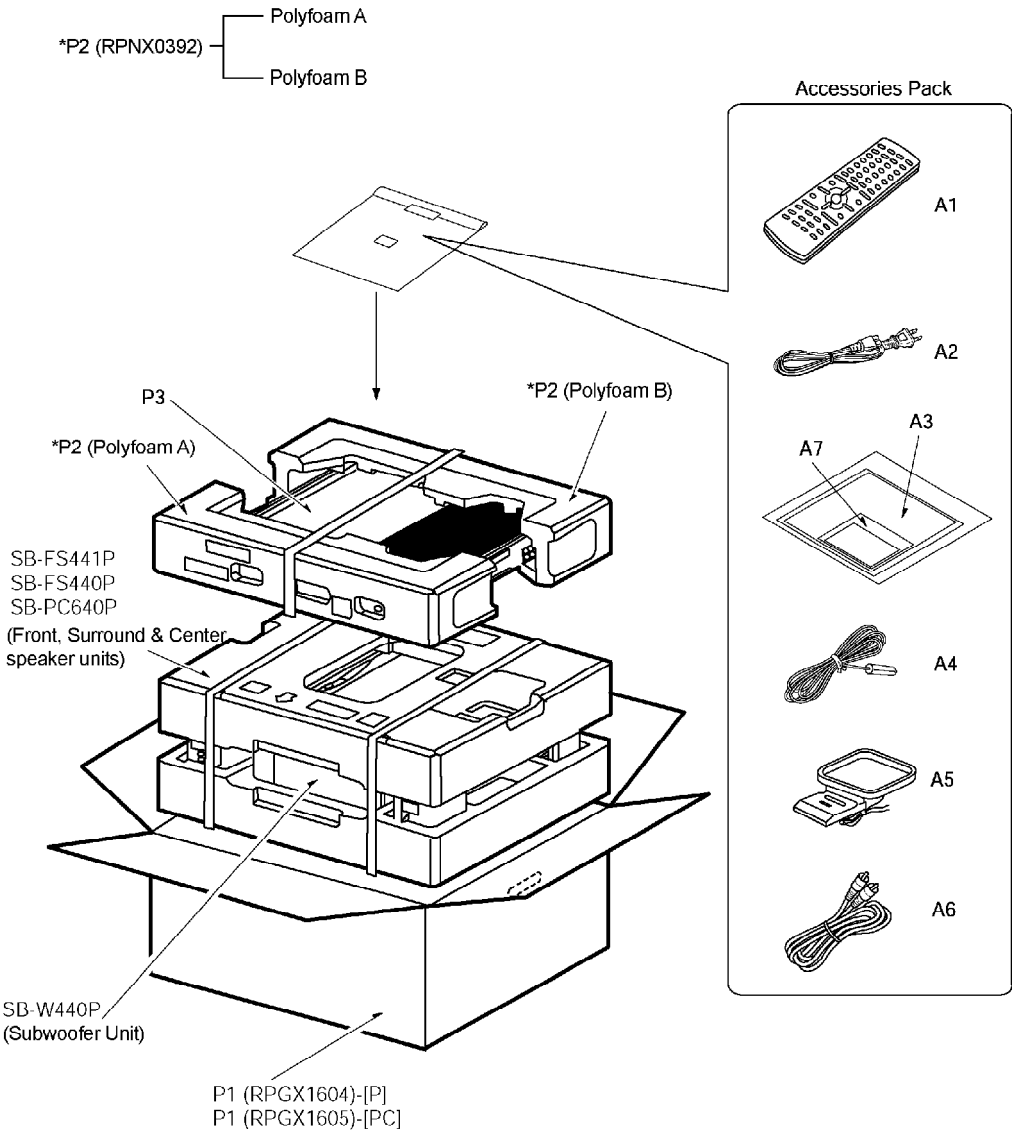


SA-HT440P/PC
CABINET DRAWINGS



SA-HT440P/PC
TRAVERSE MECHANISM DRAWINGS

23.2. Packaging



24. Replacement Parts List

Notes:

***Important safety notice:**

Components identified by ⚠ mark have special characteristics important for safety purpose. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

***Warning: This product uses a laser diode. Refer to caution statements.**

***Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F= Farads (F).**

***Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000K (OHM).**

***The parenthesized indications in the Remarks columns specify the model names and areas. (Refer to the cover page)**

***The marking (RTL) indicates the retention time is limited for this item. After the discontinuation**

of this assembly in production, it will no longer be available.
***Reference for O/I book languages are as follows:**
[En: English, Cf: Canadian French]
***[M] indicates in the Remarks columns indicates parts supplied by PAVCSG.**
***[SPG] indicates in the Remarks columns indicates parts supplied by SPG [PAVC].**

24.1. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	J3CCBC000012	TUNER PACK	[M]
2	L6FAYYYH0001	FAN UNIT	[M]
3	REEX0518-1	50P FFC WIRE	[M]
4	REEX0520	30P WIRE	[M]
5	REEX0521-1	19P FFC WIRE	[M]
6	REEX0524	11P WIRE	[M]
7	REEX0526	9P WIRE	[M]
10	REXX0499	13P WIRE	[M]
11	REXX0500	PRIMARY WIRE	[M]
12	REXX0512-1	PRIMARY WIRE	[M]
13	REXX0518	3P WIRE	[M]
14	RGQX0027	TOP FFC COVER	[M]
15	RGRX0056C-A1	REAR PANEL	[M]P
15	RGRX0056C-B	REAR PANEL	[M]PC
16	RGWX0104-S	VOLUME KNOB	[M]
17	RHD26046	SCREW	[M]
18	RHD30007-1SJ	SCREW	[M]
19	RHD30070	EARTH TERMINAL	[M]
20	RHD30107-1	SCREW	[M]
21	RHD30111-3	SCREW	[M]
22	RHD30119-S	SCREW	[M]
23	RKA0059-K	LEG RUBBER	[M]
24	RKAX0030-K	CUSHION FELT	[M]
25	RKMX0118-S1	TOP CABINET	[M]
26	RKWX0256-Q	FL ORNAMENT	[M]
27	RMAX0090	MECHA/P BRACKET	[M]
28	RMKX0115A-1	BOTTOM CHASSIS	[M]
29	RMN0730	TRAY GUIDE L	[M]
30	RMN0731	TRAY GUIDE R	[M]
31	RMNX0166	MECHA HOLDER A	[M]
32	RMNX0171	MECHA HOLDER B	[M]
33	RMQX0153-H	FAN COVER	[M]
34	RMX0274	TRAY SUPPORT R	[M]
35	RMX0275	TRAY SUPPORT L	[M]
36	RXXX0067	HEAT SINK (UNIT C)	[M]
37	RXXX0068	HEAT SINK (UNIT D)	[M]
38	RXXX0069	HEAT SINK (UNIT A)	[M]
39	RYPX0113-X	TRANSMITTER CHASSIS	[M]
40	RYQX0231B-S2	TRAY LID ASS'Y	[M]
41	XTB3+10JFJ	SCREW	[M]
42	XTB3+16JFJ	CLAMPER ASS'Y SCREW	[M]
43	RGLX0130-Q	SURROUND LIGHT CHIP	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
44	RMCX0035	HEAT SINK CLIP	[M]
45	RMX0290	PLASTIC SHEET	[M]
46	RMZX0026-1	IC INSULATOR A	[M]
47	L6FAHAKH0001	SIDE UNIT	[M]
48	REEX0523	17P WIRE	[M]
49	RXXX0070	HEAT SINK (UNIT B)	[M]
50	RMNX0149	FL HOLDER	[M]
51	RGPX0210A-S2	FRONT PANEL	[M]PC
51	RGPX0210-S2	FRONT PANEL	[M]P
52	RGUX0647-S	POWER BUTTON	[M]
53	RGUX0648-S	OPEN/CLOSE BUTTON	[M]
54	RGUX0649-S	PLAY BUTTON	[M]
55	RGUX0667-S	5 DISC BUTTON	[M]
56	RGUX0650-S	SURROUND BUTTON	[M]
57	K1NA11B00003	WIRELESS CONNECTOR	[M]
58	RMQX0175	FAN BRACKET	[M]
59	RMNX0196	INSULATOR SHEET	[M]
		TRAVERSE DECK	
301	RDG0567	PULSE GEAR	[M]
302	RDG0568	OPEN LOCK GEAR	[M]
303	RDG0569-1	CLOSE LOCK GEAR	[M]
304	RDV0073	TRAY BELT	[M]
305	REZ1734	FFC WIRE	[M]
306	RGQ0446-K	TRAY BASE	[M]
307	RGQ0359-K1	ROTARY TRAY	[M]
308	RMM0254-2	SLIDE PLATE R	[M]
309	RMB0842	TRAY SPRING	[M]
310	RME0384	CLOSE LOCK GEAR SPRING	[M]
311	RMF0324-1	BLOCK SHEET	[M]
312	RMM0255	SLIDE PLATE L	[M]
313	XTB3+10JFJ	SCREW	[M]
314	XTN26+8GFJ	SCREW	[M]
315	XTWS3+10SFJ	SCREW	[M]
316	RHM0003-J	MAGNET	[M]
317	RDG0562	PULLEY GEAR	[M]
318	RDG0563-1	REALAY GEAR A	[M]
319	RDG0564	RELAY GEAR B	[M]
320	RDG0565	DRIVE GEAR A	[M]
321	RDG0566	DRIVE GEAR B	[M]
322	RDG0570	CAM GEAR	[M]
323	RDV0072	LOADING BELT	[M]
324	RMC0387	SUPPORT SPRING	[M]
325	RMG0615-K	CUSHION SHEET	[M]
326	RMG0620-K	CUSHION RUBBER	[M]
327	RMK0555	MECHA BASE	[M]
328	RML0646	CHANGE LEVER	[M]
329	REM0112	LOADING MOTOR ASS'Y	[M]
330	RMR1446-X	CLAMPER	[M]
331	RMR1447-X	MAGNET HOLDER	[M]
332	RMR1507-X	SUPPORT PIECE	[M]
333	RMS0802-J	DRIVE SHAFT	[M]
334	XTN26+14JFJK	SUPPORT PIECE SCREW	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
335	XTV2+6GFJ	PCB SCREW	[M]
336	XWG6FFJ	WASHER	[M]
337	RMM0256-2	BLOCK BASE	[M]
338	RMS0123-1	FIXED PIN B	[M]
339	RMF0182	TRAY FELT	[M]
350	RAE2018W-S	DT69U3 BLOCK	[M]
351	RMG0598-A	FLOATING RUBBER	[M]
352	RMG0617-H	CUSHION RUBBER A	[M]
353	RMG0618-H	CUSHION RUBBER B	[M]
354	RMR1596-X2	MIDDLE CHASSIS	[M]
355	RMS0789	FIXED PIN	[M]
356	RXQ0946	TRAVERSE MOTOR ASS'Y	[M]
357	RXQ1389	DVD OPU SUB ASS'Y	[M]
		PRINTED CIRCUIT BOARDS	
	REP4080A	DVD MODULE P.C.B.	[M] (RTL)
	REPX0528A	MAIN P.C.B.	[M] (RTL)
	REPX0529A	POWER P.C.B.	[M] (RTL)
	REPX0529A	SUB POWER P.C.B.	[M] (RTL)
	REPX0529A	AC-INLET P.C.B.	[M] (RTL)
	REPX0529A	FL P.C.B.	[M] (RTL)
	REPX0529A	HEADPHONE P.C.B.	[M] (RTL)
	REP3465B	LOADING MOTOR P.C.B.	[M] (RTL)
	REP3466B	TRAY MOTOR P.C.B.	[M] (RTL)
	REP3466B	SENSOR MOTOR P.C.B.	[M] (RTL)
		INTEGRATED CIRCUITS	
IC2001	MN101C49GHG	IC MICRO-PROCESSOR	[M]
IC2003	C0GAG0000007	IC MOTOR DRIVE LOADING	[M]
IC2102	C1AB00002463	IC ASP	[M]
IC2103	C0AABB000125	IC HEADPHONES AMP	[M]
IC2105	C0ABCB000088	IC MUSIC PORT AMP	[M]
IC2801	C9ZB00000461	IC VIDEO BUFFER	[M]
IC2901	C0DAZYY00001	IC +9V REGULATOR	[M]
IC2902	C0DAZYY00001	IC +9V REGULATOR	[M]
IC2903	C0DAAMH00012	IC SW REGULATOR	[M]
IC2904	C0CAADE00007	IC +5V REGULATOR	[M]
IC2906	C0JBAR000326	IC MPORT SELECTOR	[M]
IC2907	C0CBADG00023	IC+5V REGULATOR (DVD)	[M]
IC2908	C0CBADG00023	IC +5V REGULATOR (DVD)	[M]
IC5000	C1BA00000407	IC DIGITAL AMP	[M]
IC5200	C1BA00000407	IC DIGITAL AMP	[M]
IC5300	C1BA00000407	IC DIGITAL AMP	[M]
IC5400	C1BA00000407	IC DIGITAL AMP	[M]
IC5500	C0JBAB000011	IC INVERTER (CLOCK GENERATOR)	[M]
IC5701	STR-F6628	IC SW REGULATOR	[M]
IC5702	C0DABFC00002	IC SHUNT REGULATOR	[M]
IC5721	STR-A6159	IC POWER SUPPLY	[M]
IC5750	C0GAG0000007	IC SW MOTOR DRIVER	[M]
IC6901	C0HBB0000057	IC DISPLAY DRIVER	[M]
IC8001	MN2DS0003APH	IC D2.1 LSI	[M]
IC8051	C3ABPG000133	IC 64M SDRAM	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC8111	C0CBCBD00018	IC 3.3V DC-DC CONVERTER	[M]
IC8151	C0DBEHG00006	IC 1.2V REGULATOR	[M]
IC8251	C0GBG0000048	IC MOTOR DRIVER	[M]
IC8421	C0FBBK000050	IC AUDIO DAC	[M]
IC8601	C0EBE0000384	IC RESET	[M]
IC8606	C0EBA0000031	IC RESET	[M]
IC8651	RFKWMHA0H160	IC FLASH ROM	[SPG]
IC8691	C0JBAA000346	IC AND GATE	[M]
IC8695	C0JBAA000346	IC AND GATE	[M]
		TRANSISTORS	
Q2001	B1GBCFJJ0051	TRANSISTOR	[M]
Q2003	B1GBCFLL0037	TRANSISTOR	[M]
Q2006	B1GBCFJN0033	TRANSISTOR	[M]
Q2098	B1GBCFJN0033	TRANSISTOR	[M]
Q2101	B1GFGCAA0001	TRANSISTOR	[M]
Q2201	B1GDCFGA0018	TRANSISTOR	[M]
Q2307	B1GFGCAA0001	TRANSISTOR	[M]
Q2308	B1GFGCAA0001	TRANSISTOR	[M]
Q2310	B1GDCFGA0018	TRANSISTOR	[M]
Q2901	B1ABCF000176	TRANSISTOR	[M]
Q2903	B1BACD000018	TRANSISTOR	[M]
Q2904	B1AAKD000012	TRANSISTOR	[M]
Q2906	B1BCCD000019	TRANSISTOR	[M]
Q2907	B1ADCF000001	TRANSISTOR	[M]
Q2909	B1GBCFJN0033	TRANSISTOR	[M]
Q2911	B1ABCF000176	TRANSISTOR	[M]
Q2912	B1ABCF000176	TRANSISTOR	[M]
Q2913	B1ABCF000176	TRANSISTOR	[M]
Q2914	B1ADCF000001	TRANSISTOR	[M]
Q2935	B1BACD000018	TRANSISTOR	[M]
Q5101	B1ABCF000176	TRANSISTOR	[M]
Q5102	B1ABCF000176	TRANSISTOR	[M]
Q5500	B1ADCE000012	TRANSISTOR	[M]
Q5501	B1ABCF000176	TRANSISTOR	[M]
Q5701	2SC3940ARA	TRANSISTOR	[M]
Q5704	B1ABCF000176	TRANSISTOR	[M]
Q5705	B1ABCF000176	TRANSISTOR	[M]
Q5706	B1BACD000018	TRANSISTOR	[M]
Q5710	B1ABCF000011	TRANSISTOR	[M]
Q5740	B1BACG000048	TRANSISTOR	[M]
Q5741	B1ABCF000011	TRANSISTOR	[M]
Q5742	B1ABCF000011	TRANSISTOR	[M]
Q5744	B1ABCF000011	TRANSISTOR	[M]
Q5745	B3PBA0000237	TRANSISTOR	[M]
Q5746	B1GBCFJN0033	TRANSISTOR	[M]
Q5747	B1GDCFJJ0047	TRANSISTOR	[M]
Q5748	B3PBA0000237	TRANSISTOR	[M]
Q5750	B1GBCFJJ0051	TRANSISTOR	[M]
Q5908	B1ACKD000005	TRANSISTOR	[M]
Q5930	B1ABCF000011	TRANSISTOR	[M]
Q5931	B1ABCF000011	TRANSISTOR	[M]
Q5932	B1ADCF000001	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q6901	B1GBCFJN0033	TRANSISTOR	[M]
Q8550	2SB1219AHL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	2SB09700RL	TRANSISTOR	[M]
Q8560	2SD1819A0L	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	2SB09700RL	TRANSISTOR	[M]
Q8606	2SD1819A0L	TRANSISTOR	[M]
Q8607	2SD1819A0L	TRANSISTOR	[M]
QR8111	UNR521400L	CHIP TRANSISTOR	[M]
QR8112	UNR521400L	CHIP TRANSISTOR	[M]
QR8420	UNR521100L	CHIP TRANSISTOR	[M]
QR8571	UNR511V00L	CHIP TRANSISTOR	[M]
Q9001	B3NAA0000098	CAM SENSOR	[M]
Q9101	B3NAA0000082	POSITION SENSOR	[M]
Q9102	B3NAA0000102	PHOTO INTERRUPTOR	[M]
Q9103	B3NAB0000027	PHOTO REFLECTOR	[M]
PC5701	B3PBA0000237	PHOTOCOUPLER	[M] ⚠
PC5721	B3PBA0000237	PHOTOCOUPLER	[M] ⚠
		DIODES	
D2001	B0ECKM000016	DIODE	[M]
D2002	B0ECKM000016	DIODE	[M]
D2005	B0ACCK000005	DIODE	[M]
D2007	B0ACCK000005	DIODE	[M]
D2008	B0ACCK000005	DIODE	[M]
D2601	B0ACCK000005	DIODE	[M]
D2603	B0ACCK000005	DIODE	[M]
D2609	B0ACCK000005	DIODE	[M]
D2902	B0BC7R500001	DIODE	[M]
D2904	B0JCPD000025	DIODE	[M]
D2906	B0ADCJ000020	DIODE	[M]
D2907	B0ADCJ000020	DIODE	[M]
D2912	B0BC3R700004	DIODE	[M]
D2915	B0BC5R600003	DIODE	[M]
D2934	B0ACCK000005	DIODE	[M]
D2935	B0ACCK000005	DIODE	[M]
D2936	B0ACCK000005	DIODE	[M]
D2950	B0BC7R500001	DIODE	[M]
D2951	B0ADCJ000020	DIODE	[M]
D2952	B0JCAE000001	DIODE	[M]
D5701	B0FBAR000018	DIODE	[M]
D5702	B0ZAZ0000052	DIODE	[M]
D5703	B0BC02900004	DIODE	[M]
D5704	B0JAME000029	DIODE	[M]
D5705	B0EAMM000057	DIODE	[M]
D5706	B0EAMM000057	DIODE	[M]
D5707	B0BC035A0007	DIODE	[M]
D5708	B0BC01700015	DIODE	[M]
D5709	B0ACCK000005	DIODE	[M]
D5710	B0EAMM000057	DIODE	[M]
D5711	B0HBSM000043	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D5712	B0HBSM000043	DIODE	[M]
D5713	B0BC4R0A0006	DIODE	[M]
D5716	B0HFRJ000012	DIODE	[M]
D5721	B0EAMM000057	DIODE	[M]
D5723	B0EAMM000057	DIODE	[M]
D5724	B0BC3R700004	DIODE	[M]
D5740	B0BC01200019	DIODE	[M]
D5741	B0EAMM000057	DIODE	[M]
D5743	B0ACCK000005	DIODE	[M]
D5744	B0ACCK000005	DIODE	[M]
D5745	B0EAKM000117	DIODE	[M]
D5746	B0BC5R600003	DIODE	[M]
D5748	B0EAMM000057	DIODE	[M]
D5749	B0EAMM000057	DIODE	[M]
D5750	B0ECKM000016	DIODE	[M]
D5751	B0ECKM000016	DIODE	[M]
D5752	B0BC3R400001	DIODE	[M]
D5761	B0ACCK000005	DIODE	[M]
D5764	B0ACCK000005	DIODE	[M]
D5903	MAZ82200ML	DIODE	[M]
D6906	B3ABA0000397	DIODE	[M]
D6910	B0BC2R4A0006	DIODE	[M]
D8231	MA2J11100L	DIODE	[M]
D8550	MA2J11100L	DIODE	[M]
D8571	MA2J72800L	DIODE	[M]
DZ5701	ERZV10V511CS	ZENER	[M] ⚠
		CHIP INDUCTORS	
LB5704	J0JKB0000020	EMI BEAD CORE	[M]
LB8001	J0JHC0000045	CHIP INDUCTOR	[M]
LB8002	J0JHC0000045	CHIP INDUCTOR	[M]
LB8301	J0JCC0000119	CHIP INDUCTOR	[M]
LB8302	J0JCC0000119	CHIP INDUCTOR	[M]
LB8303	J0JCC0000119	CHIP INDUCTOR	[M]
LB8304	J0JCC0000119	CHIP INDUCTOR	[M]
LB8305	J0JCC0000119	CHIP INDUCTOR	[M]
LB8401	ERJ2GEJ151X	CHIP RESISTOR	[M]
LB8421	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8422	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8423	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8424	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8425	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8426	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8427	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8428	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8429	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8430	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8491	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8502	J0JHC0000045	CHIP INDUCTOR	[M]
LB8503	ERJ2GE0R00X	CHIP RESISTOR	[M]
LB8504	J0JCC0000119	CHIP INDUCTOR	[M]
LB8505	J0JCC0000119	CHIP INDUCTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB8507	J0JCC0000119	CHIP INDUCTOR	[M]
LB8511	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8512	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8513	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8514	ERJ3GEY0R00V	CHIP RESISTOR	[M]
LB8690	J0JCC0000091	FILTER	[M]
LB8691	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8692	ERJ2GEJ101X	CHIP RESISTOR	[M]
LB8693	ERJ2GEJ101X	CHIP RESISTOR	[M]
		VARIABLE RESISTOR	
VR6800	EVEKE2F3024M	VR VOLUME JOG	[M]
		SWITCHES	
S6801	EVQ21405R	SW PLAY	[M]
S6802	EVQ21405R	SW REV	[M]
S6803	EVQ21405R	SW FWD	[M]
S6804	EVQ21405R	SW STOP	[M]
S6805	EVQ21405R	SW DISC EXCHANGE	[M]
S6806	EVQ21405R	SW SKIP	[M]
S6808	EVQ21405R	SW OPEN/CLOSE	[M]
S6900	EVQ21405R	SW POWER	[M]
S6901	EVQ21405R	SW PARTY MODE	[M]
S6902	EVQ21405R	SW DISC 1	[M]
S6903	EVQ21405R	SW DISC 2	[M]
S6904	EVQ21405R	SW DISC 3	[M]
S6905	EVQ21405R	SW DISC 4	[M]
S6906	EVQ21405R	SW DISC 5	[M]
S6907	EVQ21405R	SW SELECTOR	[M]
S9001	K0L1BA000086	OPEN SWITCH	[M]
		CONNECTORS	
CN2001	K1MY50AA0029	50P CONNECTOR	[M]
CN2002	K1KA10AA0031	10P CONNECTOR	[M]
CN2003	K1MP11A00004	11P CONNECTOR	[M]
CN2005	K1MN11AA0003	11P CONNECTOR	[M]
CN2007	K1MN30BA0005	30P CONNECTOR	[M]
CN2011	K1MN17B00037	17P CONNECTOR	[M]
CN2013	K1KA03AA0193	3P CONNECTOR	[M]
CN5050	K1MN17BA0005	17P CONNECTOR	[M]
CN5701	K1KA13BA0062	13P CONNECTOR	[M]
CN5702	K1MN11AA0003	11P CONNECTOR	[M]
CN5704	K1KA03AA0301	3P CONNECTOR	[M]
CN5705	K1MN09B00038	9P CONNECTOR	[M]
CN5706	K1KA14AA0031	14P CONNECTOR	[M]
CN5707	K1MN19B00072	19P CONNECTOR	[M]
CN5708	K1MN30AA0004	30P CONNECTOR	[M]
CN5709	K1KA14AA0031	14P CONNECTOR	[M]
CN5710	K1KB06B00038	6P CONNECTOR	[M]
CN5711	K1KA06AA0031	6P CONNECTOR	[M]
CN5712	K1KB14B00026	14P CONNECTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
CN5713	K1KB14B00026	14P CONNECTOR	[M]
CN5714	K1KA03AA0301	3P CONNECTOR	[M]
CN6901	K1MN09B00038	9P CONNECTOR	[M]
CN6902	K1MN19AA0004	19P CONNECTOR	[M]
CN9003	K1MY11BA0021	11P CONNECTOR	[M]
CN9102	K1MY11BA0021	11P CONNECTOR	[M]
FP8101	K1MN50BA0173	50P CONNECTOR	[M]
FP8251	K1MN06AA0046	6P CONNECTOR	[M]
FP8531	K1MN26AA0041	26P CONNECTOR	[M]
FP8101	K1MN50BA0173	50P CONNECTOR	[M]
FP8201	K1MN06BA0148	6P CONNECTOR	[M]
FP8501	K1MY26BA0025	CONNECTOR	[M]
		THERMISTOR	
TH5701	D4CAA2R20001	THERMISTOR	[M]
TH5702	D4CC11040013	SENSOR	[M]
		COILS & TRANSFORMERS	
L2001	J0JBC0000015	CHIP INDUCTOR	[M]
L2002	J0JBC0000015	CHIP INDUCTOR	[M]
L2003	J0JBC0000015	CHIP INDUCTOR	[M]
L2008	G0C3R3JA0027	COIL	[M]
L2009	G0C220JA0055	COIL	[M]
L2101	J0JBC0000015	CHIP INDUCTOR	[M]
L2201	J0JBC0000015	CHIP INDUCTOR	[M]
L2801	G0C220JA0055	COIL	[M]
L2802	J0JBC0000015	CHIP INDUCTOR	[M]
L2803	J0JBC0000015	CHIP INDUCTOR	[M]
L2804	J0JBC0000015	CHIP INDUCTOR	[M]
L2805	J0JBC0000015	CHIP INDUCTOR	[M]
L2806	J0JBC0000015	CHIP INDUCTOR	[M]
L2807	J0JBC0000015	CHIP INDUCTOR	[M]
L2902	G0A101ZA0028	COIL	[M]
L2903	G0A200D00002	COIL	[M]
L2904	G0A200D00002	COIL	[M]
L2905	G0A200D00002	COIL	[M]
L2906	G0A200D00002	COIL	[M]
L2908	G0A200D00002	COIL	[M]
L2909	G0A200D00002	COIL	[M]
L2910	G0A200D00002	COIL	[M]
L5000	ETQA15A150T	COIL	[M]
L5001	G0B9R5K00001	COIL	[M]
L5002	G0B9R5K00001	COIL	[M]
L5200	ETQA15A150T	COIL	[M]
L5201	G0B9R5K00001	COIL	[M]
L5300	ETQA15A150T	COIL	[M]
L5301	G0B9R5K00001	COIL	[M]
L5400	ETQA15A150T	COIL	[M]
L5401	G0B9R5K00001	COIL	[M]
L5402	G0B9R5K00001	COIL	[M]
L5500	J0JKB0000020	EMI BEAD CORE	[M]
L5501	J0JKB0000020	EMI BEAD CORE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
L5701	ELF15N050A	COIL	[M] ⚠
L5703	ELF22V035B	COIL	[M] ⚠
L5710	J0JKB0000020	EMI BEAD CORE	[M]
L5720	J0JKB0000020	EMI BEAD CORE	[M]
L5750	J0JBC0000015	CHIP INDUCTOR	[M]
L5752	J0JBC0000015	CHIP INDUCTOR	[M]
L5753	J0JBC0000015	CHIP INDUCTOR	[M]
L6101	J0JBC0000019	CHIP INDUCTOR	[M]
L6102	G0C330KA0065	COIL	[M]
L6201	J0JBC0000019	CHIP INDUCTOR	[M]
L6202	G0C330KA0065	COIL	[M]
L6801	J0JBC0000019	CHIP INDUCTOR	[M]
L6903	J0JBC0000041	CHIP INDUCTOR	[M]
L6904	J0JBC0000019	CHIP INDUCTOR	[M]
L6905	J0JBC0000019	CHIP INDUCTOR	[M]
L8201	G1C100K00020	CHIP INDUCTOR	[M]
L8202	J0JCC0000079	FILTER	[M]
L8301	G1C100KA0055	CHIP INDUCTOR	[M]
L8302	J0JCC0000079	FILTER	[M]
L8550	G1C100KA0055	CHIP INDUCTOR	[M]
T5701	ETS42BJ1G4AC	TRANSFORMER	[M] ⚠
T5721	ETS19AB1Z6AG	TRANSFORMER	[M] ⚠
		COMPONENT COMBINATION	
Z6900	B3MAZ0000023	R/CONTROL SENSOR	[M]
ZA5701	EYF52BCY	FUSE HOLDER	[M]
ZA5702	EYF52BCY	FUSE HOLDER	[M]
		OSCILLATORS	
X2001	H2D800400009	CRYSTAL	[M]
X5500	H2A375300003	CRYSTAL	[M]
X5501	H2A415300001	CRYSTAL	[M]
X8621	H0J270500085	CRYSTAL	[M]
		DISPLAY TUBE	
FL6901	A2BD00000160	FL DISPLAY	[M]
FL8101	F1H0J1050022	CHIP CAPACITOR	[M]
FL8102	F1H0J1050022	CHIP CAPACITOR	[M]
FL8103	F1H0J1050022	CHIP CAPACITOR	[M]
FL8104	F1J1E1040022	CHIP CAPACITOR	[M]
		FUSE	
F1	K5D632APA008	FUSE	[M] ⚠
		FUSE PROTECTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
FP2000	K5G202AA0002	FUSE PROTECTOR	[M] ⚠
		HOLDER	
H2010	K1YZ13000001	13 PIN HOLDER	[M]
		JACKS	
JK2001	K1U717B00004	JK COMBO	[M]
JK5400	K4AC08B00008	JK SPEAKER	[M]
JK6801	K2HC103A0024	JK SMALL SIGN	[M]
JK6802	K2HC1YYA0005	JK JUMPER WIRE	[M]
P5701	K2AB2B000008	JK AC INLET	[M] ⚠
		EARTH TERMINALS	
E2900	K4CZ01000027	TERMINAL	[M]
ZJ5400	K4CZ01000027	TERMINAL	[M]
ZJ5410	K4CZ01000027	TERMINAL	[M]
ZJ5701	K9ZZ00001279	TERMINAL	[M]
		PACKING MATERIALS	
P1	RPGX1604	PACKING CASE	[M]P
P1	RPGX1605	PACKING CASE	[M]PC
P2	RPNX0392	POLYFOAM	[M]
P3	RPFX0058-1J	MIRAMAT	[M]
		ACCESSORIES	
A1	N2QAYZ000001	REMOTE CONTROL	[M]
A1-1	RKK-HTR0051K	R/C BATTERY COVER	[M]
A2	K2CB2CB00018	AC CORD	[M] ⚠
A3	RQT8593-P	O/I BOOK (En)	[M]P
A3	RQT8594-C	O/I BOOK (Cf)	[M]PC
A4	RSA0007-L	FM ANTENNA	[M]
A5	N1DAAAA00002	AM LOOP ANTENNA	[M]
A6	K2KA2BA00001	VIDEO CABLE	[M]
A7	RQCA0968	SPEAKER LABEL	[M]
		RESISTORS	
R2001	ERJ3GEYJ331V	330 1/16W	[M]
R2002	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2003	ERJ3GEYJ103V	10K 1/16W	[M]
R2004	ERJ3GEYJ331V	330 1/16W	[M]
R2005	ERJ3GEYJ331V	330 1/16W	[M]
R2006	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2012	ERJ3GEYJ101V	100 1/16W	[M]
R2013	ERJ3GEYJ101V	100 1/16W	[M]
R2014	ERJ3GEYJ221V	220 1/16W	[M]
R2015	ERJ3GEYJ272V	2.7K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2016	ERJ3GEYJ473V	47K 1/16W	[M]
R2017	ERJ3GEYJ103V	10K 1/16W	[M]
R2018	ERJ3GEYJ103V	10K 1/16W	[M]
R2019	ERJ3GEYJ103V	10K 1/16W	[M]
R2020	ERJ3GEYJ103V	10K 1/16W	[M]
R2021	ERJ3GEYJ103V	10K 1/16W	[M]
R2022	ERJ3GEYJ821V	820 1/16W	[M]
R2023	ERJ3GEY0R00V	0 1/16W	[M]
R2024	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2025	ERJ3GEYJ221V	220 1/16W	[M]
R2026	ERJ3GEYJ221V	220 1/16W	[M]
R2027	ERJ3GEYJ101V	100 1/16W	[M]
R2028	ERJ3GEYJ101V	100 1/16W	[M]
R2029	ERJ3GEYJ101V	100 1/16W	[M]
R2030	ERJ3GEYJ101V	100 1/16W	[M]
R2031	ERJ3GEYJ101V	100 1/16W	[M]
R2032	ERJ3GEYJ101V	100 1/16W	[M]
R2033	ERJ3GEYJ102V	1K 1/16W	[M]
R2034	ERJ3GEYJ221V	220 1/16W	[M]
R2035	ERJ3GEYJ221V	220 1/16W	[M]
R2036	ERJ3GEYJ221V	220 1/16W	[M]
R2037	ERJ3GEYJ221V	220 1/16W	[M]
R2038	ERJ3GEYJ221V	220 1/16W	[M]
R2039	ERJ3GEYJ223V	22K 1/16W	[M]
R2040	ERJ3GEYJ223V	22K 1/16W	[M]
R2041	ERJ3GEYJ223V	22K 1/16W	[M]
R2042	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2043	ERJ3GEYJ104V	100K 1/16W	[M]
R2044	ERJ3GEYJ221V	220 1/16W	[M]
R2045	ERJ3GEYJ221V	220 1/16W	[M]
R2048	ERJ3GEY0R00V	0 1/16W	[M]
R2049	ERJ3GEY0R00V	0 1/16W	[M]
R2051	ERJ3GEYJ103V	10K 1/16W	[M]
R2052	ERJ3GEYJ221V	220 1/16W	[M]
R2053	ERJ3GEYJ221V	220 1/16W	[M]
R2054	ERJ3GEYJ221V	220 1/16W	[M]
R2055	ERJ3GEYJ221V	220 1/16W	[M]
R2057	ERJ3GEYJ221V	220 1/16W	[M]
R2058	ERJ3GEYJ221V	220 1/16W	[M]
R2059	ERJ3GEYJ221V	220 1/16W	[M]
R2060	ERJ3GEYJ221V	220 1/16W	[M]
R2061	ERJ3GEYJ473V	47K 1/16W	[M]
R2062	ERJ3GEYJ221V	220 1/16W	[M]
R2063	ERJ3GEYJ221V	220 1/16W	[M]
R2064	ERJ3GEYJ103V	10K 1/16W	[M]
R2065	ERJ3GEYJ103V	10K 1/16W	[M]
R2066	ERJ3GEYJ104V	100K 1/16W	[M]
R2067	ERJ3GEYJ473V	47K 1/16W	[M]
R2068	ERJ3GEYJ563V	56K 1/16W	[M]
R2069	ERJ3GEYJ473V	47K 1/16W	[M]
R2070	ERJ3GEYJ473V	47K 1/16W	[M]
R2071	ERJ3GEYJ563V	56K 1/16W	[M]
R2073	ERJ3GEYJ473V	47K 1/16W	[M]
R2077	ERJ3GEYJ221V	220 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2078	ERJ3GEYJ221V	220 1/16W	[M]
R2079	ERJ3GEYJ221V	220 1/16W	[M]
R2080	ERJ3GEYJ221V	220 1/16W	[M]
R2081	ERJ3GEYJ221V	220 1/16W	[M]
R2082	ERJ3GEYJ221V	220 1/16W	[M]
R2084	ERJ3GEYJ473V	47K 1/16W	[M]
R2085	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2086	ERJ3GEYJ223V	22K 1/16W	[M]
R2087	ERJ3GEYJ223V	22K 1/16W	[M]
R2088	ERJ3GEYJ221V	220 1/16W	[M]
R2089	ERJ3GEYJ221V	220 1/16W	[M]
R2090	ERJ3GEYJ103V	10K 1/16W	[M]
R2101	ERJ3GEYJ103V	10K 1/16W	[M]
R2111	ERJ3GEYJ103V	10K 1/16W	[M]
R2112	ERJ3GEYJ223V	22K 1/16W	[M]
R2113	ERJ3GEY0R00V	0 1/16W	[M]
R2114	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2115	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2160	ERJ3GEYJ102V	1K 1/16W	[M]
R2161	ERJ3GEYJ473V	47K 1/16W	[M]
R2164	ERJ3GEYJ103V	10K 1/16W	[M]
R2165	ERJ3GEYJ103V	10K 1/16W	[M]
R2168	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2169	ERJ3GEYJ104V	100K 1/16W	[M]
R2170	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2171	ERJ3GEYJ273V	27K 1/16W	[M]
R2172	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2173	ERJ3GEYJ473V	47K 1/16W	[M]
R2175	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2176	ERJ3GEYJ183V	18K 1/16W	[M]
R2177	ERJ3GEYJ220V	22 1/16W	[M]
R2178	ERJ3GEYJ220V	22 1/16W	[M]
R2179	ERJ3GEYJ220V	22 1/16W	[M]
R2180	ERJ3GEYJ220V	22 1/16W	[M]
R2181	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2185	ERJ3GEYJ103V	10K 1/16W	[M]
R2188	ERJ3GEYJ123V	12K 1/16W	[M]
R2189	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2191	ERJ3GEYJ223V	22K 1/16W	[M]
R2193	ERJ3GEYJ100V	10 1/16W	[M]
R2194	ERJ3GEYJ223V	22K 1/16W	[M]
R2195	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2196	ERJ3GEYJ333V	33K 1/16W	[M]
R2197	ERJ3GEYJ683V	68K 1/16W	[M]
R2198	ERJ3GEY0R00V	0 1/16W	[M]
R2201	ERJ3GEYJ103V	10K 1/16W	[M]
R2211	ERJ3GEYJ103V	10K 1/16W	[M]
R2212	ERJ3GEYJ223V	22K 1/16W	[M]
R2214	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2215	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2218	ERJ3GEY0R00V	0 1/16W	[M]
R2260	ERJ3GEYJ102V	1K 1/16W	[M]
R2261	ERJ3GEYJ473V	47K 1/16W	[M]
R2264	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2265	ERJ3GEYJ103V	10K 1/16W	[M]
R2268	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2269	ERJ3GEYJ104V	100K 1/16W	[M]
R2270	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2271	ERJ3GEYJ563V	56K 1/16W	[M]
R2273	ERJ3GEYJ473V	47K 1/16W	[M]
R2275	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2276	ERJ3GEYJ183V	18K 1/16W	[M]
R2277	ERJ3GEYJ220V	22 1/16W	[M]
R2278	ERJ3GEYJ220V	22 1/16W	[M]
R2279	ERJ3GEYJ220V	22 1/16W	[M]
R2280	ERJ3GEYJ220V	22 1/16W	[M]
R2281	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2285	ERJ3GEYJ103V	10K 1/16W	[M]
R2288	ERJ3GEYJ123V	12K 1/16W	[M]
R2289	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2291	ERJ3GEYJ223V	22K 1/16W	[M]
R2293	ERJ3GEYJ100V	10 1/16W	[M]
R2294	ERJ3GEYJ223V	22K 1/16W	[M]
R2295	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2296	ERJ3GEYJ333V	33K 1/16W	[M]
R2297	ERJ3GEYJ683V	68K 1/16W	[M]
R2298	ERJ3GEY0R00V	0 1/16W	[M]
R2300	ERJ3GEYJ123V	12K 1/16W	[M]
R2301	ERJ3GEYJ473V	47K 1/16W	[M]
R2302	ERJ3GEYJ223V	22K 1/16W	[M]
R2303	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2304	ERJ3GEYJ123V	12K 1/16W	[M]
R2312	ERJ3GEYJ103V	10K 1/16W	[M]
R2336	ERJ3GEYJ103V	10K 1/16W	[M]
R2339	ERJ3GEYJ223V	22K 1/16W	[M]
R2343	ERJ3GEYJ563V	56K 1/16W	[M]
R2344	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2400	ERJ3GEYJ123V	12K 1/16W	[M]
R2401	ERJ3GEYJ473V	47K 1/16W	[M]
R2402	ERJ3GEYJ223V	22K 1/16W	[M]
R2403	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2404	ERJ3GEYJ123V	12K 1/16W	[M]
R2412	ERJ3GEYJ103V	10K 1/16W	[M]
R2436	ERJ3GEYJ103V	10K 1/16W	[M]
R2439	ERJ3GEYJ223V	22K 1/16W	[M]
R2443	ERJ3GEYJ563V	56K 1/16W	[M]
R2444	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2500	ERJ3GEYJ123V	12K 1/16W	[M]
R2501	ERJ3GEYJ333V	33K 1/16W	[M]
R2502	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2503	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2510	ERJ3GEYJ123V	12K 1/16W	[M]
R2511	ERJ3GEYJ103V	10K 1/16W	[M]
R2512	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2513	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2600	ERJ3GEYJ103V	10K 1/16W	[M]
R2601	ERJ3GEYJ153V	15K 1/16W	[M]
R2606	ERJ3GEYJ563V	56K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2607	ERJ3GEYJ103V	10K 1/16W	[M]
R2608	ERJ3GEYJ563V	56K 1/16W	[M]
R2609	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2610	ERJ3GEYJ563V	56K 1/16W	[M]
R2611	ERJ3GEYJ122V	1.2K 1/16W	[M]
R2612	ERJ3GEYJ683V	68K 1/16W	[M]
R2617	ERJ3GEYJ103V	10K 1/16W	[M]
R2619	ERJ3GEYJ473V	47K 1/16W	[M]
R2620	ERJ3GEYJ823V	82K 1/16W	[M]
R2621	ERJ3GEYJ393V	39K 1/16W	[M]
R2626	ERJ3GEYJ683V	68K 1/16W	[M]
R2627	ERJ3GEYJ683V	68K 1/16W	[M]
R2628	ERJ3GEYJ103V	10K 1/16W	[M]
R2629	ERJ3GEYJ103V	10K 1/16W	[M]
R2630	ERJ3GEY0R00V	0 1/16W	[M]
R2631	ERJ3GEY0R00V	0 1/16W	[M]
R2633	ERJ3GEYJ390V	39 1/16W	[M]
R2634	ERJ3GEYJ390V	39 1/16W	[M]
R2635	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2809	ERJ3GEYJ750V	75 1/16W	[M]
R2812	ERJ3GEYJ750V	75 1/16W	[M]
R2813	ERJ3GEYJ750V	75 1/16W	[M]
R2816	ERJ3GEYJ750V	75 1/16W	[M]
R2817	ERJ3GEYJ750V	75 1/16W	[M]
R2818	ERJ3GEYJ750V	75 1/16W	[M]
R2819	ERJ3GEYJ102V	1K 1/16W	[M]
R2904	ERJ3GEYJ471V	470 1/16W	[M]
R2905	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2906	ERG2SJ471E	470 2W	[M]
R2907	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2908	ERJ3GEYJ561V	560 1/16W	[M]
R2913	ERG2SJ471E	470 2W	[M]
R2914	ERJ3GEYJ392V	3.9K 1/16W	[M]
R2915	ERJ3GEYJ272V	2.7K 1/16W	[M]
R2918	ERJ3GEYJ103V	10K 1/16W	[M]
R2919	ERJ3GEYJ102V	1K 1/16W	[M]
R2920	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2921	ERJ3GEYJ471V	470 1/16W	[M]
R2922	ERJ3GEYJ393V	39K 1/16W	[M]
R2923	ERJ3GEYJ153V	15K 1/16W	[M]
R2925	ERX2SJ1R5E	1.5 2W	[M]
R2927	ERX2SJ1R5E	1.5 2W	[M]
R2930	ERJ3GEYJ333V	33K 1/16W	[M]
R2933	ERJ3GEYJ151V	150 1/16W	[M]
R2934	ERJ3GEYJ102V	1K 1/16W	[M]
R2935	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2936	ERJ3GEYJ181V	180 1/16W	[M]
R2937	ERG2SJ471E	470 2W	[M]
R2938	ERG2SJ471E	470 2W	[M]
R2939	ERJ3GEYJ393V	39K 1/16W	[M]
R2942	ERJ3GEY0R00V	0 1/16W	[M]
R2943	ERJ3GEY0R00V	0 1/16W	[M]
R2945	ERJ3GEYJ104V	100K 1/16W	[M]
R2946	ERJ3GEYJ330V	33 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2947	ERJ3GEYJ104V	100K 1/16W	[M]
R2950	ERJ3GEYJ221V	220 1/16W	[M]
R2951	ERJ3GEYJ221V	220 1/16W	[M]
R2952	ERJ3GEYJ221V	220 1/16W	[M]
R2953	ERJ3GEYJ221V	220 1/16W	[M]
R2955	ERJ3GEYJ221V	220 1/16W	[M]
R2960	ERJ3GEYJ104V	100K 1/16W	[M]
R2961	ERJ3GEYJ103V	10K 1/16W	[M]
R2962	ERJ3GEYJ473V	47K 1/16W	[M]
R2963	ERJ3GEYJ103V	10K 1/16W	[M]
R2964	ERJ3GEYJ103V	10K 1/16W	[M]
R2965	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2966	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2967	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2968	ERJ3GEYJ104V	100K 1/16W	[M]
R2969	ERJ3GEYJ103V	10K 1/16W	[M]
R2970	ERJ3GEYJ562V	5.6K 1/16W	[M]
R2971	ERJ3GEYJ221V	220 1/16W	[M]
R2972	ERJ3GEYJ221V	220 1/16W	[M]
R2973	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2974	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2975	ERJ3GEYJ103V	10K 1/16W	[M]
R2976	ERJ3GEYJ103V	10K 1/16W	[M]
R2981	ERJ3GEY0R00V	0 1/16W	[M]
R2982	ERJ3GEY0R00V	0 1/16W	[M]
R2983	ERJ3GEY0R00V	0 1/16W	[M]
R2984	ERJ3GEY0R00V	0 1/16W	[M]
R2985	ERJ3GEYJ221V	220 1/16W	[M]
R2986	ERJ3GEYJ221V	220 1/16W	[M]
R2987	ERJ3GEYJ221V	220 1/16W	[M]
R2990	D0C18R2JA020	8.2 1W	[M]
R2991	ERJ3GEYJ473V	47K 1/16W	[M]
R2993	ERJ3GEY0R00V	0 1/16W	[M]
R5000	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5001	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5002	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5003	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5004	ERJ8GEYJ100V	10 1/8W	[M]
R5005	ERJ8GEYJ100V	10 1/8W	[M]
R5006	ERJ1TYJ220U	22 1/8W	[M]
R5007	ERJ1TYJ220U	22 1/8W	[M]
R5010	ERJ8GEYJ100V	10 1/8W	[M]
R5011	ERJ8GEYJ100V	10 1/8W	[M]
R5019	ERJ3GEYJ683V	68K 1/16W	[M]
R5020	ERJ3GEYJ124V	120K 1/16W	[M]
R5021	ERJ3GEYJ222V	2.2K 1/16W	[M]
R5022	ERJ3GEYJ122V	1.2K 1/16W	[M]
R5030	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5031	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5032	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5033	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5034	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5035	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5036	ERJ3GEYJ562V	5.6K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5037	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5103	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5104	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5110	ERJ3GEYJ223V	22K 1/16W	[M]
R5111	ERJ3GEYJ124V	120K 1/16W	[M]
R5113	ERJ3GEYJ683V	68K 1/16W	[M]
R5118	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5119	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5200	ERJ8GEYJ100V	10 1/8W	[M]
R5201	ERJ8GEYJ100V	10 1/8W	[M]
R5205	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5206	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5209	ERJ1TYJ220U	22 1/8W	[M]
R5210	ERJ8GEYJ100V	10 1/8W	[M]
R5211	ERJ8GEYJ100V	10 1/8W	[M]
R5217	ERJ1TYJ220U	22 1/8W	[M]
R5218	ERJ3GEYJ124V	120K 1/16W	[M]
R5228	ERJ3GEYJ124V	120K 1/16W	[M]
R5300	ERJ1TYJ220U	22 1/8W	[M]
R5302	ERJ8GEYJ100V	10 1/8W	[M]
R5305	ERJ8GEYJ100V	10 1/8W	[M]
R5306	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5307	ERJ3GEYJ562V	5.6K 1/16W	[M]
R5310	ERJ8GEYJ100V	10 1/8W	[M]
R5311	ERJ8GEYJ100V	10 1/8W	[M]
R5318	ERJ3GEYJ124V	120K 1/16W	[M]
R5319	ERJ1TYJ220U	22 1/8W	[M]
R5328	ERJ3GEYJ124V	120K 1/16W	[M]
R5400	ERJ1TYJ220U	22 1/8W	[M]
R5402	ERJ8GEYJ100V	10 1/8W	[M]
R5405	ERJ8GEYJ100V	10 1/8W	[M]
R5410	ERJ8GEYJ100V	10 1/8W	[M]
R5411	ERJ8GEYJ100V	10 1/8W	[M]
R5419	ERJ1TYJ220U	22 1/8W	[M]
R5501	ERJ3GEYJ102V	1K 1/16W	[M]
R5502	ERJ3GEYJ103V	10K 1/16W	[M]
R5503	ERJ3GEYJ104V	100K 1/16W	[M]
R5504	ERJ3GEYJ220V	22 1/16W	[M]
R5505	ERJ3GEYJ104V	100K 1/16W	[M]
R5506	ERJ3GEYJ682V	6.8K 1/16W	[M]
R5507	ERJ3GEYJ105V	1M 1/16W	[M]
R5508	ERJ3GEYJ104V	100K 1/16W	[M]
R5509	ERJ3GEY0R00V	0 1/16W	[M]
R5573	ERJ3GEYJ101V	100 1/16W	[M]
R5575	ERJ3GEYJ101V	100 1/16W	[M]
R5701	ERC12UGK335D	3.3M 1/2W	[M] ⚠
R5702	ERDS1FVJ1R0T	1 1/2W	[M]
R5703	ERJ6GEYJ681V	680 1/10W	[M]
R5704	ERX2LJ68MP	0.68 2W	[M]
R5705	ERX2LJ68MP	0.68 2W	[M]
R5706	ERG2SJ333P	33K 2W	[M]
R5707	ERG2SJ333P	33K 2W	[M]
R5708	ERJ6GEYJ332V	3.3K 1/10W	[M]
R5709	ERJ6GEYJ222V	2.2K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5710	ERJ6GEYJ103V	10K 1/10W	[M]
R5711	ERJ6GEYJ220V	22 1/10W	[M]
R5712	ERJ6GEYJ222V	2.2K 1/10W	[M]
R5713	ERJ3GEYF272V	2.7K 1/16W	[M]
R5714	ERJ3GEYF473V	47K 1/16W	[M]
R5715	ERJ3GEYD153V	15K 1/16W	[M]
R5716	ERJ3GEYJ390V	39 1/16W	[M]
R5723	ERJ3GEYF472V	4.7K 1/16W	[M]
R5724	ERJ3GEYF122V	1.2K 1/16W	[M]
R5725	ERJ3GEYF561V	560 1/16W	[M]
R5726	ERJ3GEYJ102V	1K 1/16W	[M]
R5727	ERJ3GEYJ222V	2.2K 1/16W	[M]
R5728	ERJ3GEY0R00V	0 1/16W	[M]
R5729	ERJ6GEYJ562V	5.6K 1/10W	[M]
R5735	ERJM1WSF10MU	1 1/2W	[M]
R5736	ERDS1FVJ471T	470 1/2W	[M]
R5737	ERJ3GEYJ100V	10 1/16W	[M]
R5739	ERDS1FVJ821T	820 1/2W	[M]
R5750	ERJ3GEYJ331V	330 1/16W	[M]
R5751	ERDS1TJ474	470K 1/2W	[M]
R5752	ERJ3GEYJ472V	4.7K 1/16W	[M]
R5753	ERJ3GEYJ331V	330 1/16W	[M]
R5754	ERJ3GEYJ332V	3.3K 1/16W	[M]
R5755	ERJ3GEYJ103V	10K 1/16W	[M]
R5756	ERJ3GEYJ103V	10K 1/16W	[M]
R5757	ERJ3GEYJ103V	10K 1/16W	[M]
R5758	ERJ3GEYJ335V	3.3M 1/16W	[M]
R5759	ERJ3GEYJ104V	100K 1/16W	[M]
R5760	ERJ3GEYJ103V	10K 1/16W	[M]
R5763	ERJ3GEYF222V	2.2K 1/16W	[M]
R5764	ERJ3GEYJ103V	10K 1/16W	[M]
R5770	ERJ3GEYJ103V	10K 1/16W	[M]
R5771	ERJ6GEYJ100V	10 1/10W	[M]
R5772	ERDS1FVJ4R7T	4.7 1/2W	[M]
R5773	ERJ3GEYF561V	560 1/16W	[M]
R5774	ERDS1FVJ4R7T	4.7 1/2W	[M]
R5776	ERJ3GEYJ331V	330 1/16W	[M]
R5777	ERJ3GEYJ332V	3.3K 1/16W	[M]
R5778	ERDS1FVJ4R7T	4.7 1/2W	[M]
R5779	ERJ3GEYJ102V	1K 1/16W	[M]
R5780	ERJ3GEYJ331V	330 1/16W	[M]
R5781	ERJ3GEYJ103V	10K 1/16W	[M]
R5783	ERJ3GEYJ103V	10K 1/16W	[M]
R5784	ERJ8GEYJ394V	390K 1/8W	[M]
R5785	ERJ8GEYJ394V	390K 1/8W	[M]
R5786	ERJ3GEYJ104V	100K 1/16W	[M]
R5791	ERJ3GEY0R00V	0 1/16W	[M]
R5792	ERG2SJ470E	47 2W	[M]
R5793	ERG2SJ470E	47 2W	[M]
R5794	ERG2SJ470E	47 2W	[M]
R5795	ERG2SJ470E	47 2W	[M]
R5916	ERJ3GEYJ151V	150 1/16W	[M]
R5917	ERJ3GEYJ472V	4.7K 1/16W	[M]
R5930	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5931	ERJ3GEYJ103V	10K 1/16W	[M]
R5932	ERJ3GEYJ103V	10K 1/16W	[M]
R5933	ERJ3GEYJ822V	8.2K 1/16W	[M]
R5934	ERJ3GEYJ103V	10K 1/16W	[M]
R6801	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6802	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6803	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6804	ERJ3GEYJ102V	1K 1/16W	[M]
R6805	ERJ3GEYJ102V	1K 1/16W	[M]
R6807	ERJ3GEYJ223V	22K 1/16W	[M]
R6809	ERJ3GEYJ223V	22K 1/16W	[M]
R6810	ERJ3GEYJ682V	6.8K 1/16W	[M]
R6812	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6914	ERJ3GEYJ563V	56K 1/16W	[M]
R6916	ERJ3GEYJ680V	68 1/16W	[M]
R6917	ERJ3GEYJ680V	68 1/16W	[M]
R6918	ERJ3GEYJ223V	22K 1/16W	[M]
R6922	ERJ3GEYJ102V	1K 1/16W	[M]
R6923	ERJ3GEYJ102V	1K 1/16W	[M]
R6924	ERJ3GEYJ122V	1.2K 1/16W	[M]
R6925	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6926	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6927	ERJ3GEYJ680V	68 1/16W	[M]
R6928	ERJ3GEYJ272V	2.7K 1/16W	[M]
R6934	ERJ3GEYJ470V	47 1/16W	[M]
R6935	ERJ3GEYJ100V	10 1/16W	[M]
R6939	ERJ3GEYJ1R0V	1 1/16W	[M]
R6940	ERJ3GEYJ1R0V	1 1/16W	[M]
R6946	ERJ3GEYJ221V	220 1/16W	[M]
R6947	ERJ3GEYJ472V	4.7K 1/16W	[M]
R6948	ERJ3GEYJ102V	1K 1/16W	[M]
R6949	ERJ3GEYJ102V	1K 1/16W	[M]
R6950	ERJ3GEYJ473V	47K 1/16W	[M]
R6951	ERJ3GEYJ473V	47K 1/16W	[M]
R6957	ERJ3GEYJ221V	220 1/16W	[M]
R6960	ERJ3GEYJ222V	2.2K 1/16W	[M]
R8011	ERJ2GEJ220X	22 2W	[M]
R8021	ERJ2GEJ103X	10K 2W	[M]
R8022	ERJ2GEJ103X	10K 2W	[M]
R8023	ERJ2GEJ473X	47K 2W	[M]
R8041	ERJ2GEJ330X	33 2W	[M]
R8111	ERJ2GEJ223X	22K 2W	[M]
R8112	ERJ2GEJ223X	22K 2W	[M]
R8153	ERJ2RHD621X	620 2W	[M]
R8154	ERJ2RHD102X	1K 2W	[M]
R8201	ERJ2GEJ222X	2.2K 2W	[M]
R8231	ERJ2GEJ103X	10K 2W	[M]
R8233	ERJ2GEJ153X	15K 2W	[M]
R8235	ERJ2GEJ822X	8.2K 2W	[M]
R8236	ERJ2GEJ822X	8.2K 2W	[M]
R8241	ERJ2GEJ223X	22K 2W	[M]
R8242	ERJ2GEJ752X	7.5K 2W	[M]
R8243	ERJ2GEJ103X	10K 2W	[M]
R8251	ERJ6GEYJ6R8V	6.8 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8261	ERJ2GEJ823X	82K 2W	[M]
R8262	ERJ2GEJ472X	4.7K 2W	[M]
R8263	ERJ2GEJ823X	82K 2W	[M]
R8264	ERJ2GEJ472X	4.7K 2W	[M]
R8265	ERJ2GE0R00X	0 2W	[M]
R8311	ERJ2RHD242X	2.4K 2W	[M]
R8312	ERJ2RHD102X	1K 2W	[M]
R8313	ERJ2RHD243X	24K 2W	[M]
R8314	ERJ2GE0R00X	0 2W	[M]
R8315	ERJ2GEJ6R8X	6.8 2W	[M]
R8321	ERJ3RBD161V	160 3W	[M]
R8322	ERJ2RKD100X	10 2W	[M]
R8325	ERJ3RBD161V	160 3W	[M]
R8326	ERJ2GE0R00X	0 2W	[M]
R8331	ERJ3RBD161V	160 3W	[M]
R8332	ERJ2RKD100X	10 2W	[M]
R8335	ERJ3RED820V	82 3W	[M]
R8341	ERJ3RED820V	82 3W	[M]
R8401	ERJ2GEJ473X	47K 2W	[M]
R8402	ERJ2GEJ101X	100 2W	[M]
R8404	ERJ2GEJ101X	100 2W	[M]
R8407	ERJ2GEJ101X	100 2W	[M]
R8420	ERJ2GEJ222X	2.2K 2W	[M]
R8421	ERJ2GE0R00X	0 2W	[M]
R8501	ERJ2GE0R00X	0 2W	[M]
R8505	ERJ2GEJ222X	2.2K 2W	[M]
R8506	ERJ2GEJ152X	1.5K 2W	[M]
R8550	ERJ2GEJ752X	7.5K 2W	[M]
R8551	ERJ2GE0R00X	0 2W	[M]
R8552	ERJ2GEJ102X	1K 2W	[M]
R8553	ERJ2GEJ102X	1K 2W	[M]
R8554	ERJ2GEJ680X	68 2W	[M]
R8555	ERJ2GEJ2R2X	2.2 2W	[M]
R8556	ERJ3GEYJ560V	56 1/16W	[M]
R8557	ERJ3GEYJ510V	51 1/16W	[M]
R8558	ERJ2GEJ473X	47K 2W	[M]
R8559	ERJ2GEJ153X	15K 2W	[M]
R8560	ERJ2GEJ102X	1K 2W	[M]
R8561	ERJ2GE0R00X	0 2W	[M]
R8562	ERJ2GEJ102X	1K 2W	[M]
R8563	ERJ2GEJ102X	1K 2W	[M]
R8564	ERJ2GEJ220X	22 2W	[M]
R8565	ERJ2GEJ2R2X	2.2 2W	[M]
R8566	ERJ3GEYJ560V	56 1/16W	[M]
R8567	ERJ3GEYJ510V	51 1/16W	[M]
R8568	ERJ2GEJ473X	47K 2W	[M]
R8569	ERJ2GEJ123X	12K 2W	[M]
R8570	ERJ2GEJ104X	100K 2W	[M]
R8601	ERJ2GEJ102X	1K 2W	[M]
R8606	ERJ2GEJ104X	100K 2W	[M]
R8607	ERJ2GEJ103X	10K 2W	[M]
R8611	ERJ2GEJ101X	100 2W	[M]
R8621	ERJ2GEJ105X	1M 2W	[M]
R8622	ERJ2RHD102X	1K 2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
RX8011	D1H88204A024	CHIP RESISTOR	[M]
RX8012	D1H88204A024	CHIP RESISTOR	[M]
RX8013	D1H88204A024	CHIP RESISTOR	[M]
RX8014	D1H88204A024	CHIP RESISTOR	[M]
RX8015	D1H422020001	CHIP RESISTOR	[M]
RX8016	D1H88204A024	CHIP RESISTOR	[M]
RX8017	D1H88204A024	CHIP RESISTOR	[M]
RX8018	D1H88204A024	CHIP RESISTOR	[M]
RX8021	D1H410320002	CHIP RESISTOR	[M]
RX8031	D1H447220001	CHIP RESISTOR	[M]
RX8032	D1H447220001	CHIP RESISTOR	[M]
RX8401	D1H410120001	CHIP RESISTOR	[M]
RX8402	D1H410120001	CHIP RESISTOR	[M]
RX8501	D1H456020001	CHIP RESISTOR	[M]
RX8502	D1H85604A024	CHIP RESISTOR	[M]
RX8503	D1H456020001	CHIP RESISTOR	[M]
RX8504	D1H456020001	CHIP RESISTOR	[M]
RX8611	D1H447220001	CHIP RESISTOR	[M]
K2100	ERJ3GEY0R00V	CHIP JUMPER	[M]
K2200	ERJ3GEY0R00V	CHIP JUMPER	[M]
K2300	ERJ3GEY0R00V	CHIP JUMPER	[M]
K2400	ERJ3GEY0R00V	CHIP JUMPER	[M]
K8031	ERJ2GE0R00X	CHIP JUMPER	[M]
K8106	ERJ3GEY0R00V	CHIP JUMPER	[M]
K8421	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2001	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2002	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2003	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2005	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2006	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2007	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2008	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2009	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2010	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2011	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2012	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2013	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2014	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2015	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2016	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2017	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2018	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2019	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2020	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2021	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2022	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2023	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2024	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2025	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2101	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2102	ERJ3GEY0R00V	CHIP JUMPER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W2103	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2104	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2105	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2106	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2107	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2108	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2109	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2110	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2111	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2112	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2113	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2114	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2115	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2116	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2117	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2118	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2119	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2120	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2121	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2122	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2123	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2124	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2127	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2128	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2129	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2130	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2131	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2133	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2134	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2135	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2136	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2137	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2138	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2139	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2140	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2150	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2156	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2157	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2158	ERJ3GEY0R00V	CHIP JUMPER	[M]
W2159	ERJ3GEY0R00V	CHIP JUMPER	[M]
W5847	ERJ3GEY0R00V	CHIP JUMPER	[M]
		WIRES	
FC9101	RWJ4906082SS	6P WIRE	[M]
		CAPACITORS	
C2001	ECEA1CKS470I	47 16V	[M]
C2002	ECJ1VB1C104K	0.1 16V	[M]
C2003	ECEA1EKS220B	22 25V	[M]
C2004	ECJ1VB1H103K	0.01 50V	[M]
C2006	ECEA1HKS2R2B	2.2 50V	[M]
C2007	ECJ1VB1C104K	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2008	ECEA0JKS101B	100 6.3V	[M]
C2009	ECJ1VB1C104K	0.1 16V	[M]
C2010	ECJ1VB1H331K	330P 50V	[M]
C2011	ECJ1VB1H331K	330P 50V	[M]
C2012	ECJ1VB1H331K	330P 50V	[M]
C2013	ECJ1VB1H223K	0.022 50V	[M]
C2016	ECEA1CKS470I	47 16V	[M]
C2017	ECJ1VB1H103K	0.01 50V	[M]
C2018	ECEA1CKS470I	47 16V	[M]
C2019	ECEA1CKS470I	47 16V	[M]
C2020	ECJ1VB1H103K	0.01 50V	[M]
C2021	ECA1AAD221XI	220 10V	[M]
C2022	ECA1CAK221XB	220 16V	[M]
C2023	ECJ1VB1H221K	220P 50V	[M]
C2024	ECJ1VB1H221K	220P 50V	[M]
C2026	ECEA1CKS100I	10 16V	[M]
C2027	ECJ1VB1C104K	0.1 16V	[M]
C2028	ECJ1VB1C104K	0.1 16V	[M]
C2029	ECJ1VB1H471K	470P 50V	[M]
C2030	ECJ1VB1H471K	470P 50V	[M]
C2101	ECJ1VB1A105K	1 10V	[M]
C2111	ECJ1VB1A105K	1 10V	[M]
C2112	ECJ1VB1H471K	470P 50V	[M]
C2114	ECJ1VB1H562K	5600P 50V	[M]
C2115	ECJ1VC1H181J	180P 50V	[M]
C2117	ECJ1VB1C104K	0.1 16V	[M]
C2118	ECJ1VB1C104K	0.1 16V	[M]
C2119	ECJ1VB1A105K	1 10V	[M]
C2120	ECJ1VB1C333K	0.033 16V	[M]
C2121	ECJ1VB1C104K	0.1 16V	[M]
C2160	ECJ1VB1C183K	0.018 16V	[M]
C2161	ECJ1VB1C393K	0.039 16V	[M]
C2162	ECJ1VB1H332K	3300P 50V	[M]
C2164	ECJ1VB1H221K	220P 50V	[M]
C2169	ECJ1VB1H103K	0.01 50V	[M]
C2170	ECEA1HKS010B	1 50V	[M]
C2171	ECEA1EKS4R7B	4.7 25V	[M]
C2172	ECJ1VC1H101J	100P 50V	[M]
C2177	ECEA1HKS010I	1 50V	[M]
C2178	ECJ1VC1H101J	100P 50V	[M]
C2179	ECJ1VC1H470J	47P 50V	[M]
C2180	ECJ1VB1C104K	0.1 16V	[M]
C2181	ECJ1VB1H102K	1000P 50V	[M]
C2183	ECEA1HKS3R3B	3.3 50V	[M]
C2185	ECJ1VB1A105K	1 10V	[M]
C2186	ECJ1VB1A105K	1 10V	[M]
C2187	ECJ1VB1A105K	1 10V	[M]
C2188	ECJ1VB1A105K	1 10V	[M]
C2190	ECJ1VB1A105K	1 10V	[M]
C2191	ECJ1VC1H101J	100P 50V	[M]
C2193	ECJ1VB1C104K	0.1 16V	[M]
C2194	ECJ1VB1H182K	1800P 50V	[M]
C2201	ECJ1VB1A105K	1 10V	[M]
C2211	ECJ1VB1A105K	1 10V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2212	ECJ1VB1H471K	470P 50V	[M]
C2214	ECJ1VB1H562K	5600P 50V	[M]
C2215	ECJ1VC1H181J	180P 50V	[M]
C2217	ECJ1VB1C104K	0.1 16V	[M]
C2218	ECJ1VB1C104K	0.1 16V	[M]
C2219	ECJ1VB1A105K	1 10V	[M]
C2220	ECJ1VB1C333K	0.033 16V	[M]
C2221	ECJ1VB1C104K	0.1 16V	[M]
C2260	ECJ1VB1C183K	0.018 16V	[M]
C2261	ECJ1VB1C393K	0.039 16V	[M]
C2262	ECJ1VB1H332K	3300P 50V	[M]
C2264	ECJ1VB1H221K	220P 50V	[M]
C2270	ECEA1HKS010B	1 50V	[M]
C2272	ECJ1VC1H101J	100P 50V	[M]
C2277	ECEA1HKS010I	1 50V	[M]
C2278	ECJ1VC1H101J	100P 50V	[M]
C2279	ECJ1VC1H470J	47P 50V	[M]
C2280	ECJ1VB1C104K	0.1 16V	[M]
C2281	ECJ1VB1H102K	1000P 50V	[M]
C2283	ECEA1HKS3R3B	3.3 50V	[M]
C2285	ECJ1VB1A105K	1 10V	[M]
C2286	ECJ1VB1A105K	1 10V	[M]
C2287	ECJ1VB1A105K	1 10V	[M]
C2288	ECJ1VB1A105K	1 10V	[M]
C2290	ECJ1VB1A105K	1 10V	[M]
C2291	ECJ1VC1H101J	100P 50V	[M]
C2293	ECJ1VB1C104K	0.1 16V	[M]
C2294	ECJ1VB1H182K	1800P 50V	[M]
C2300	ECJ1VB1A105K	1 10V	[M]
C2301	ECJ2YB0J475K	4.7 6.3V	[M]
C2302	ECJ1VB1C393K	0.039 16V	[M]
C2303	ECJ1VB1C104K	0.1 16V	[M]
C2304	ECEA1CKS100I	10 16V	[M]
C2305	ECJ1VB1H332K	3300P 50V	[M]
C2306	ECJ1VB1A154K	0.15 10V	[M]
C2307	ECEA1CKS100I	10 16V	[M]
C2308	ECJ1VB1H223K	0.022 50V	[M]
C2309	ECJ1VB1C823K	0.082 16V	[M]
C2312	ECEA1HKS3R3B	3.3 50V	[M]
C2323	ECJ1VB1H471K	470P 50V	[M]
C2324	ECJ1VB1H272K	2700P 50V	[M]
C2400	ECJ1VB1A105K	1 10V	[M]
C2401	ECJ2YB0J475K	4.7 6.3V	[M]
C2402	ECJ1VB1C393K	0.039 16V	[M]
C2403	ECJ1VB1C104K	0.1 16V	[M]
C2404	ECEA1CKS100I	10 16V	[M]
C2405	ECJ1VB1H332K	3300P 50V	[M]
C2406	ECJ1VB1A154K	0.15 10V	[M]
C2407	ECEA1CKS100I	10 16V	[M]
C2408	ECJ1VB1H223K	0.022 50V	[M]
C2412	ECEA1HKS3R3B	3.3 50V	[M]
C2423	ECJ1VB1H471K	470P 50V	[M]
C2424	ECJ1VB1H272K	2700P 50V	[M]
C2500	ECJ1VB1A105K	1 10V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2501	ECEA1CKS100I	10 16V	[M]
C2502	ECJ1VB1C333K	0.033 16V	[M]
C2503	ECJ1VB1C104K	0.1 16V	[M]
C2506	ECEA1HKS010B	1 50V	[M]
C2507	ECJ1VB1H471K	470P 50V	[M]
C2509	ECJ1VB1H222K	2200P 50V	[M]
C2600	ECJ1VB1A105K	1 10V	[M]
C2601	ECJ1VB1C823K	0.082 16V	[M]
C2606	ECEA1CKS100I	10 16V	[M]
C2607	ECEA1EKS220B	22 25V	[M]
C2608	ECEA1CKS100I	10 16V	[M]
C2609	ECJ1VB1A474K	0.47 10V	[M]
C2610	ECJ1VB1A474K	0.47 10V	[M]
C2611	ECJ1VB1H123K	0.012 50V	[M]
C2612	ECJ1VB1H332K	3300P 50V	[M]
C2615	ECJ1VB1H222K	2200P 50V	[M]
C2617	ECJ1VB1C124K	0.12 16V	[M]
C2619	ECEA1HKA100B	10 50V	[M]
C2620	ECJ1VC1H101J	100P 50V	[M]
C2621	ECJ1VB1C104K	0.1 16V	[M]
C2623	ECJ1VC1H101J	100P 50V	[M]
C2801	ECJ1VB1C104K	0.1 16V	[M]
C2802	ECEA0JKS101B	100 6.3V	[M]
C2803	ECEA0JKS101B	100 6.3V	[M]
C2804	ECEA0JKS101B	100 6.3V	[M]
C2805	ECEA0JKS101B	100 6.3V	[M]
C2806	ECEA0JKS101B	100 6.3V	[M]
C2807	ECJ1VB1H103K	0.01 50V	[M]
C2808	ECA1AAD221XI	220 10V	[M]
C2809	ECEA1EKS220B	22 25V	[M]
C2810	ECJ1VB1H103K	0.01 50V	[M]
C2811	ECJ1VB1C104K	0.1 16V	[M]
C2812	ECJ1VB1C104K	0.1 16V	[M]
C2814	ECEA1EKS220B	22 25V	[M]
C2815	ECEA1EKS220B	22 25V	[M]
C2816	ECEA1EKS220B	22 25V	[M]
C2817	ECJ1VB1A105K	1 10V	[M]
C2818	ECJ1VB1A105K	1 10V	[M]
C2819	ECJ1VC1H101J	100P 50V	[M]
C2820	ECJ1VC1H101J	100P 50V	[M]
C2821	ECJ1VC1H101J	100P 50V	[M]
C2822	ECJ1VC1H101J	100P 50V	[M]
C2823	ECJ1VC1H101J	100P 50V	[M]
C2825	ECJ1VC1H101J	100P 50V	[M]
C2826	ECJ1VC1H101J	100P 50V	[M]
C2827	ECJ1VC1H101J	100P 50V	[M]
C2828	ECJ1VC1H101J	100P 50V	[M]
C2829	ECJ1VC1H101J	100P 50V	[M]
C2830	ECJ1VC1H101J	100P 50V	[M]
C2832	ECJ1VB1H221K	220P 50V	[M]
C2833	ECJ1VB1H104K	0.1 50V	[M]
C2834	ECEA1EKS220B	22 25V	[M]
C2835	ECEA1EKS220B	22 25V	[M]
C2836	ECJ1VB1C104K	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2837	ECJ1VB1C104K	0.1 16V	[M]
C2838	ECJ1VB1C104K	0.1 16V	[M]
C2839	ECJ1VB1C104K	0.1 16V	[M]
C2901	ECA1EM102B	1000 25V	[M]
C2902	ECJ1VB1H103K	0.01 50V	[M]
C2903	ECJ1VB1H103K	0.01 50V	[M]
C2906	ECJ1VB1H103K	0.01 50V	[M]
C2908	ECEA1CKA101B	100 16V	[M]
C2910	ECJ1VB1H103K	0.01 50V	[M]
C2913	ECEA1CKA101B	100 16V	[M]
C2914	ECEA1AKA330B	33 10V	[M]
C2917	ECJ1VB1H104K	0.1 50V	[M]
C2918	ECA1CAK470XB	47 16V	[M]
C2919	ECJ1VC1H101J	100P 50V	[M]
C2920	ECJ1VB1H103K	0.01 50V	[M]
C2921	ECA1EM221B	220 25V	[M]
C2922	EEUFC0J821B	820P 6.3V	[M]
C2923	ECEA1CKA101B	100 16V	[M]
C2925	ECA0JAK221XB	220 6.3V	[M]
C2926	ECJ1VB1C104K	0.1 16V	[M]
C2927	ECEA1CKA101B	100 16V	[M]
C2929	ECA0JAK221XB	220 6.3V	[M]
C2930	ECJ1VB1A105K	1 10V	[M]
C2931	ECA0JAK221XB	220 6.3V	[M]
C2932	ECEA1CKA101B	100 16V	[M]
C2940	ECJ1VB1H104K	0.1 50V	[M]
C2941	ECEA1CKA470B	47 16V	[M]
C2944	EEUFC0J821B	820P 6.3V	[M]
C2945	ECJ1VB1H103K	0.01 50V	[M]
C2946	ECEA1CKA101B	100 16V	[M]
C2950	ECJ1VB1C104K	0.1 16V	[M]
C2951	ECJ1VB1C104K	0.1 16V	[M]
C2952	ECJ1VB1H103K	0.01 50V	[M]
C2953	ECJ1VB1H103K	0.01 50V	[M]
C2954	ECJ1VB1H103K	0.01 50V	[M]
C2955	ECJ1VB1H103K	0.01 50V	[M]
C2956	ECJ1VB1H103K	0.01 50V	[M]
C2957	ECJ1VB1H103K	0.01 50V	[M]
C2958	ECJ1VB1H103K	0.01 50V	[M]
C2960	ECJ1VB1A105K	1 10V	[M]
C2962	ECEA1CKA101B	100 16V	[M]
C2963	EEUFC0J821B	820P 6.3V	[M]
C2964	ECJ1VB1H103K	0.01 50V	[M]
C2965	ECJ1VB1H103K	0.01 50V	[M]
C2966	ECJ1VB1H103K	0.01 50V	[M]
C2967	ECJ1VB1H103K	0.01 50V	[M]
C2968	ECEA1CKA101B	100 16V	[M]
C2969	ECEA1CKA101B	100 16V	[M]
C5000	ECJ1VB1H102K	1000P 50V	[M]
C5001	ECJ1VB1H102K	1000P 50V	[M]
C5002	ECJ1VB1H104K	0.1 50V	[M]
C5003	ECJ1VB1H104K	0.1 50V	[M]
C5004	ECJ1VB1H104K	0.1 50V	[M]
C5005	ECJ1VB1H104K	0.1 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5006	ECJ1VB1H331K	330P 50V	[M]
C5007	ECJ1VB1H331K	330P 50V	[M]
C5008	ECJ1VB1H153K	0.015 50V	[M]
C5009	ECJ1VB1H153K	0.015 50V	[M]
C5010	ECJ2VC2A221J	220P 100V	[M]
C5011	ECJ2VC2A221J	220P 100V	[M]
C5012	ECJ2VC2A221J	220P 100V	[M]
C5013	ECJ2VC2A221J	220P 100V	[M]
C5014	ECQV1H474JL3	0.47 50V	[M]
C5015	ECQV1H474JL3	0.47 50V	[M]
C5016	ECJ1VB1H104K	0.1 50V	[M]
C5017	ECJ1VB1H104K	0.1 50V	[M]
C5018	ECJ3YB2A104K	0.1 100V	[M]
C5019	ECJ3YB2A104K	0.1 100V	[M]
C5020	ECJ1VB1H104K	0.1 50V	[M]
C5021	ECJ3YB2A104K	0.1 100V	[M]
C5022	ECJ1VB1H104K	0.1 50V	[M]
C5023	ECJ3YB2A104K	0.1 100V	[M]
C5024	ECJ1VB1H104K	0.1 50V	[M]
C5025	ECJ1VB1H104K	0.1 50V	[M]
C5026	ECJ3YB2A104K	0.1 100V	[M]
C5027	ECJ1VB1H104K	0.1 50V	[M]
C5028	ECJ1VB1H104K	0.1 50V	[M]
C5029	ECJ3YB2A104K	0.1 100V	[M]
C5030	ECJ1VC1H221J	220P 50V	[M]
C5031	ECJ1VB1C224K	0.22 16V	[M]
C5034	ECJ1VB1H103K	0.01 50V	[M]
C5035	ECJ1VB1H103K	0.01 50V	[M]
C5036	ECJ1VB1H103K	0.01 50V	[M]
C5037	ECJ1VB1H103K	0.01 50V	[M]
C5040	ECA2AM220B	22 100V	[M]
C5106	ECJ1VB1H104K	0.1 50V	[M]
C5107	ECJ1VB1H104K	0.1 50V	[M]
C5117	ECJ1VB1H102K	1000P 50V	[M]
C5119	ECJ1VB1H102K	1000P 50V	[M]
C5120	ECJ1VB1H104K	0.1 50V	[M]
C5121	ECJ1VB1H104K	0.1 50V	[M]
C5133	ECA0JAK101XB	100 6.3V	[M]
C5134	ECJ1VB1H103K	0.01 50V	[M]
C5135	ECJ1VB1H103K	0.01 50V	[M]
C5136	ECJ1VB1H103K	0.01 50V	[M]
C5137	ECJ1VB1H103K	0.01 50V	[M]
C5200	ECJ1VB1H104K	0.1 50V	[M]
C5201	ECJ1VB1H153K	0.015 50V	[M]
C5202	ECJ1VB1C224K	0.22 16V	[M]
C5203	ECJ2VC2A221J	220P 100V	[M]
C5204	ECJ1VB1H153K	0.015 50V	[M]
C5205	ECJ2VC2A221J	220P 100V	[M]
C5206	ECJ1VB1H104K	0.1 50V	[M]
C5207	ECJ3YB2A104K	0.1 100V	[M]
C5208	ECJ1VB1H104K	0.1 50V	[M]
C5209	ECJ1VB1H104K	0.1 50V	[M]
C5210	ECJ3YB2A104K	0.1 100V	[M]
C5211	ECJ2VC2A221J	220P 100V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5212	ECJ1VC1H221J	220P 50V	[M]
C5213	ECJ3YB2A104K	0.1 100V	[M]
C5214	ECJ1VB1H104K	0.1 50V	[M]
C5215	ECJ3YB2A104K	0.1 100V	[M]
C5216	ECJ1VB1H331K	330P 50V	[M]
C5217	ECJ3YB2A104K	0.1 100V	[M]
C5218	ECJ2VC2A221J	220P 100V	[M]
C5219	ECJ3YB2A104K	0.1 100V	[M]
C5220	ECJ1VB1H104K	0.1 50V	[M]
C5221	ECJ1VB1H102K	1000P 50V	[M]
C5222	ECJ1VB1H104K	0.1 50V	[M]
C5223	ECJ1VB1H104K	0.1 50V	[M]
C5224	ECJ1VB1H331K	330P 50V	[M]
C5225	ECQV1H474JL3	0.47 50V	[M]
C5226	ECJ1VB1H104K	0.1 50V	[M]
C5227	ECJ1VB1H104K	0.1 50V	[M]
C5228	ECQV1H474JL3	0.47 50V	[M]
C5231	ECJ1VB1H103K	0.01 50V	[M]
C5232	ECJ1VB1H103K	0.01 50V	[M]
C5240	ECA2AM220B	22 100V	[M]
C5300	ECQV1H474JL3	0.47 50V	[M]
C5301	ECJ1VB1H104K	0.1 50V	[M]
C5302	ECJ1VB1H104K	0.1 50V	[M]
C5303	ECJ1VB1H104K	0.1 50V	[M]
C5304	ECJ1VB1H331K	330P 50V	[M]
C5305	ECJ1VB1H104K	0.1 50V	[M]
C5306	ECJ1VB1H104K	0.1 50V	[M]
C5307	ECJ2VC2A221J	220P 100V	[M]
C5308	ECJ3YB2A104K	0.1 100V	[M]
C5309	ECJ3YB2A104K	0.1 100V	[M]
C5310	ECJ3YB2A104K	0.1 100V	[M]
C5311	ECJ2VC2A221J	220P 100V	[M]
C5312	ECJ1VB1H331K	330P 50V	[M]
C5313	ECJ1VB1H104K	0.1 50V	[M]
C5314	ECJ1VB1A474K	0.47 10V	[M]
C5315	ECJ1VB1H102K	1000P 50V	[M]
C5316	ECJ1VB1H104K	0.1 50V	[M]
C5317	ECJ1VB1A474K	0.47 10V	[M]
C5318	ECJ3YB2A104K	0.1 100V	[M]
C5319	ECJ3YB2A104K	0.1 100V	[M]
C5320	ECJ3YB2A104K	0.1 100V	[M]
C5321	ECJ1VB1C224K	0.22 16V	[M]
C5322	ECJ1VB1H153K	0.015 50V	[M]
C5323	ECJ1VC1H221J	220P 50V	[M]
C5324	ECJ1VB1H153K	0.015 50V	[M]
C5325	ECJ2VC2A221J	220P 100V	[M]
C5326	ECJ2VC2A221J	220P 100V	[M]
C5327	ECJ1VB1H104K	0.1 50V	[M]
C5328	ECQV1H474JL3	0.47 50V	[M]
C5331	ECJ1VB1H103K	0.01 50V	[M]
C5332	ECJ1VB1H103K	0.01 50V	[M]
C5400	ECQV1H474JL3	0.47 50V	[M]
C5401	ECJ1VB1H104K	0.1 50V	[M]
C5402	ECJ1VB1H104K	0.1 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5403	ECJ1VB1H104K	0.1 50V	[M]
C5404	ECJ1VB1H331K	330P 50V	[M]
C5405	ECJ1VB1H104K	0.1 50V	[M]
C5406	ECJ1VB1H104K	0.1 50V	[M]
C5407	ECJ2VC2A221J	220P 100V	[M]
C5408	ECJ3YB2A104K	0.1 100V	[M]
C5409	ECJ3YB2A104K	0.1 100V	[M]
C5410	ECJ3YB2A104K	0.1 100V	[M]
C5411	ECJ2VC2A221J	220P 100V	[M]
C5412	ECJ1VB1H331K	330P 50V	[M]
C5413	ECJ1VB1H104K	0.1 50V	[M]
C5416	ECJ1VB1H104K	0.1 50V	[M]
C5418	ECJ3YB2A104K	0.1 100V	[M]
C5419	ECJ3YB2A104K	0.1 100V	[M]
C5420	ECJ3YB2A104K	0.1 100V	[M]
C5421	ECJ1VB1C224K	0.22 16V	[M]
C5422	ECJ1VB1H153K	0.015 50V	[M]
C5423	ECJ1VC1H221J	220P 50V	[M]
C5424	ECJ1VB1H153K	0.015 50V	[M]
C5425	ECJ2VC2A221J	220P 100V	[M]
C5426	ECJ2VC2A221J	220P 100V	[M]
C5427	ECJ1VB1H104K	0.1 50V	[M]
C5428	ECQV1H474JL3	0.47 50V	[M]
C5440	ECA2AM220B	22 100V	[M]
C5450	ECJ1VB1H104K	0.1 50V	[M]
C5508	ECA1VM471B	470 35V	[M]
C5509	ECA1VM471B	470 35V	[M]
C5510	ECA1VM471B	470 35V	[M]
C5511	ECA1VM471B	470 35V	[M]
C5512	ECA1VM471B	470 35V	[M]
C5513	ECA1VM471B	470 35V	[M]
C5514	ECJ1VB1H104K	0.1 50V	[M]
C5515	ECJ1VB1H104K	0.1 50V	[M]
C5516	ECA1VM471B	470 35V	[M]
C5517	ECA1VM471B	470 35V	[M]
C5550	ECJ1VB1H471K	470P 50V	[M]
C5551	ECJ1VC1H101J	100P 50V	[M]
C5552	ECJ1VC1H101J	100P 50V	[M]
C5553	ECJ1VC1H101J	100P 50V	[M]
C5555	ECJ3YB1C106K	10 16V	[M]
C5556	ECJ1VB1H471K	470P 50V	[M]
C5557	ECA0JM331B	330 6.3V	[M]
C5558	ECA1CAK100XB	10 16V	[M]
C5559	ECA1CAK100XB	10 16V	[M]
C5700	F2B2D5610008	560P 250V	[M]
C5701	ECQU2A224MLC	0.22 100V	[M] ⚠
C5702	F1J2E1030004	0.01 250V	[M]
C5706	ECQU2A224MLC	0.22 100V	[M] ⚠
C5708	ECQE2103KF	0.01 250V	[M]
C5709	ECJ1VB1H471K	470P 50V	[M]
C5710	ECQP6332JUB	CAPACITOR	[M]
C5711	F2A1H5600009	56P 50V	[M]
C5712	ECJ1VB1H221K	220P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5713	ECJ1VB1H102K	1000P 50V	[M]
C5714	F1BAF2220023	22P 10V	[M] ⚠
C5715	ECA1CAK470XB	47 16V	[M]
C5717	F2A1V3320011	3300P 35V	[M]
C5718	F2A1V3320011	3300P 35V	[M]
C5720	ECJ1VB1H104K	0.1 50V	[M]
C5722	ECJ1VB1H104K	0.1 50V	[M]
C5725	ECA1HAK2R2XB	2.2 50V	[M]
C5727	ECCN3A470KGE	47P 1000V	[M]
C5729	ECA1HAK220XB	22 50V	[M]
C5732	ECJ1VB1H104K	0.1 50V	[M]
C5733	ECA1CAK221XB	220 16V	[M]
C5736	F1BAF2220023	22P 10V	[M] ⚠
C5737	F1BAF2220023	22P 10V	[M] ⚠
C5738	ECJ1VB1H681K	680P 50V	[M]
C5741	ECA1AM471B	470 10V	[M]
C5742	ECA1VAM102XB	1000 35V	[M]
C5761	ECJ1VB1H104K	0.1 50V	[M]
C5770	F1B2H103A060	0.01 500V	[M]
C5771	F1B2H103A060	0.01 500V	[M]
C5772	F1B2H103A060	0.01 500V	[M]
C5773	F1B2H103A060	0.01 500V	[M]
C5774	F1B2H103A060	0.01 500V	[M]
C5790	ECJ1VB1H102K	1000P 50V	[M]
C5791	ECA1HAM101XB	100 50V	[M]
C5792	ECA0JAK221XB	220 6.3V	[M]
C5794	ECA1CAK330XB	33 16V	[M]
C5795	ECJ1VB1H104K	0.1 50V	[M]
C5796	ECA1VAM102XB	1000 35V	[M]
C5797	ECA1CAK100XB	10 16V	[M]
C5915	ECJ1VB1H103K	0.01 50V	[M]
C5916	ECA1HM101B	100 50V	[M]
C6101	ECJ1VB1H473K	0.047 50V	[M]
C6201	ECJ1VB1H473K	0.047 50V	[M]
C6801	ECJ1VB1H104K	0.1 50V	[M]
C6805	ECJ1VC1H101K	100P 50V	[M]
C6806	ECJ1VC1H101K	100P 50V	[M]
C6903	ECEA1HKA220B	22 50V	[M]
C6904	ECJ1VB1H102K	1000P 50V	[M]
C6905	ECEA1HKA220B	22 50V	[M]
C6906	ECJ1VC1H101K	100P 50V	[M]
C6909	ECJ1VB1H103K	0.01 50V	[M]
C6910	ECEA0JKS101B	100 6.3V	[M]
C6911	ECJ1VB1H103K	0.01 50V	[M]
C6912	ECJ1VB1C104K	0.1 16V	[M]
C6913	ECEA1HKS3R3B	3.3 50V	[M]
C6916	ECJ1VC1H101K	100P 50V	[M]
C6917	ECJ1VC1H101K	100P 50V	[M]
C6918	ECEA1AKA470B	47 10V	[M]
C6919	ECJ1VC1H101K	100P 50V	[M]
C6920	ECJ1VB1H331K	330P 50V	[M]
C6921	ECJ1VB1H331K	330P 50V	[M]
C6923	ECJ1VB1H103K	0.01 50V	[M]

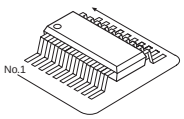
Ref. No.	Part No.	Part Name & Description	Remarks
C6924	ECJ1VB1H103K	0.01 50V	[M]
C6925	ECJ1VB1H103K	0.01 50V	[M]
C6926	ECJ1VB1C104K	0.1 16V	[M]
C6927	ECJ1VB1C104K	0.1 16V	[M]
C8001	F2G0J101A066	100P 6.3V	[M]
C8002	F2G0G331A012	330P 4V	[M]
C8003	ECJ0EB1E222K	2200P 25V	[M]
C8004	ECJ0EF1C104Z	0.1 16V	[M]
C8005	ECJ0EF1C104Z	0.1 16V	[M]
C8006	ECJ0EF1C104Z	0.1 16V	[M]
C8007	ECJ0EF1C104Z	0.1 16V	[M]
C8008	ECJ0EF1C104Z	0.1 16V	[M]
C8009	ECJ0EF1C104Z	0.1 16V	[M]
C8010	ECJ0EF1C104Z	0.1 16V	[M]
C8011	ECJ1VB0J105K	1 6.3V	[M]
C8012	ECJ0EF1C104Z	0.1 16V	[M]
C8013	ECJ0EF1C104Z	0.1 16V	[M]
C8014	ECJ0EF1C104Z	0.1 16V	[M]
C8015	ECJ1VB0J105K	1 6.3V	[M]
C8016	ECJ1VB0J105K	1 6.3V	[M]
C8017	ECJ0EF1C104Z	0.1 16V	[M]
C8018	ECJ0EF1C104Z	0.1 16V	[M]
C8019	ECJ1VB0J105K	1 6.3V	[M]
C8020	ECJ0EF1C104Z	0.1 16V	[M]
C8021	ECJ0EF1C104Z	0.1 16V	[M]
C8022	ECJ0EF1C104Z	0.1 16V	[M]
C8023	ECJ1VB0J105K	1 6.3V	[M]
C8024	ECJ1VB0J105K	1 6.3V	[M]
C8025	ECJ0EF1C104Z	0.1 16V	[M]
C8026	ECJ0EB1E222K	2200P 25V	[M]
C8027	ECJ0EF1C104Z	0.1 16V	[M]
C8028	ECJ1VB0J105K	1 6.3V	[M]
C8031	ECJ0EF1C104Z	0.1 16V	[M]
C8051	ECJ1VB0J105K	1 6.3V	[M]
C8052	ECJ0EF1C104Z	0.1 16V	[M]
C8053	ECJ0EC1H221J	220P 50V	[M]
C8054	ECJ1VB0J105K	1 6.3V	[M]
C8055	ECJ1VB0J105K	1 6.3V	[M]
C8056	ECJ0EF1C104Z	0.1 16V	[M]
C8057	ECJ0EB1E222K	2200P 25V	[M]
C8111	ECJ0EB1A104K	0.1 10V	[M]
C8112	ECJ1VB0J105K	1 6.3V	[M]
C8113	ECJ0EB1E471K	470P 25V	[M]
C8151	ECJ2YB0J225K	2.2 6.3V	[M]
C8152	ECJ1VB1C105K	1 16V	[M]
C8201	F2H0J101A003	100P 6.3V	[M]
C8202	F2G0J101A066	100P 6.3V	[M]
C8203	ECJ0EF1C104Z	0.1 16V	[M]
C8204	ECJ0EF1C104Z	0.1 16V	[M]
C8205	ECJ0EF1C104Z	0.1 16V	[M]
C8206	ECJ1VB0J105K	1 6.3V	[M]
C8207	ECJ1VF1C104Z	0.1 16V	[M]
C8208	ECJ0EF1C104Z	0.1 16V	[M]
C8211	ECJ0EB1A333K	0.033 10V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8212	ECJ0EF1C104Z	0.1 16V	[M]
C8213	ECJ0EF1C104Z	0.1 16V	[M]
C8214	ECJ0EF1C104Z	0.1 16V	[M]
C8215	ECJ0EB1E562K	5600P 25V	[M]
C8216	ECJ0EB1C183K	0.018 16V	[M]
C8217	ECJ1VB0J105K	1 6.3V	[M]
C8218	ECJ1VB0J105K	1 6.3V	[M]
C8221	ECJ0EB1A104K	0.1 10V	[M]
C8222	ECJ0EB1A104K	0.1 10V	[M]
C8223	ECJ0EB1A104K	0.1 10V	[M]
C8224	ECJ0EB1A104K	0.1 10V	[M]
C8225	ECJ0EF1C104Z	0.1 16V	[M]
C8226	ECJ0EF1C104Z	0.1 16V	[M]
C8227	ECJ0EF1C104Z	0.1 16V	[M]
C8228	ECJ1VB0J105K	1 6.3V	[M]
C8229	ECJ1VB0J105K	1 6.3V	[M]
C8232	ECJ1VF1C104Z	0.1 16V	[M]
C8233	ECJ0EB1E472K	4700P 25V	[M]
C8234	ECJ0EF1C104Z	0.1 16V	[M]
C8235	ECJ0EB1H102K	1000P 50V	[M]
C8236	ECJ0EB1H102K	1000P 50V	[M]
C8237	ECJ0EB1H102K	1000P 50V	[M]
C8238	ECJ0EB1H821K	820P 50V	[M]
C8241	ECJ0EB1A104K	0.1 10V	[M]
C8242	ECJ0EB1A104K	0.1 10V	[M]
C8251	F2G0J221A065	220P 6.3V	[M]
C8252	F2G1C470A076	47P 16V	[M]
C8253	F2H1C220A003	22P 16V	[M]
C8254	ECJ0EF1C104Z	0.1 16V	[M]
C8255	ECJ0EF1C104Z	0.1 16V	[M]
C8256	ECJ0EF1C104Z	0.1 16V	[M]
C8257	ECJ0EF1C104Z	0.1 16V	[M]
C8261	ECJ0EF1C104Z	0.1 16V	[M]
C8262	ECJ0EF1C104Z	0.1 16V	[M]
C8301	F2H0J2210006	220P 6.3V	[M]
C8302	F2H0J330A003	33P 6.3V	[M]
C8303	ECJ0EF1C104Z	0.1 16V	[M]
C8304	ECJ1VB0J105K	1 6.3V	[M]
C8307	ECJ0EF1C104Z	0.1 16V	[M]
C8308	ECJ0EC1H150J	15P 50V	[M]
C8311	ECJ0EF1C104Z	0.1 16V	[M]
C8312	ECJ1VB0J105K	1 6.3V	[M]
C8421	F2G0J101A083	100P 6.3V	[M]
C8422	ECJ0EF1C104Z	0.1 16V	[M]
C8423	F2G0J330A083	33P 6.3V	[M]
C8424	ECJ0EF1C104Z	0.1 16V	[M]
C8426	ECJ0EF1C104Z	0.1 16V	[M]
C8427	ECJ0EF1C104Z	0.1 16V	[M]
C8428	ECJ0EF1C104Z	0.1 16V	[M]
C8501	ECJ3YB1A106M	10 10V	[M]
C8502	ECJ0EF1C104Z	0.1 16V	[M]
C8503	ECJ0EF1C104Z	0.1 16V	[M]
C8504	ECJ0EF1C104Z	0.1 16V	[M]
C8505	ECJ0EC1H221J	220P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8506	ECJ0EC1H101J	100P 50V	[M]
C8550	F2H0J330A003	33P 6.3V	[M]
C8551	ECJ0EF1C104Z	0.1 16V	[M]
C8552	F2G1C100A072	10P 16V	[M]
C8553	F2H0J470A003	47P 6.3V	[M]
C8554	ECJ1VB0J105K	1 6.3V	[M]
C8561	ECJ0EF1C104Z	0.1 16V	[M]
C8562	F2G1C100A072	10P 16V	[M]
C8563	F2H0J470A003	47P 6.3V	[M]
C8564	ECJ1VB0J105K	1 6.3V	[M]
C8601	ECJ0EF1C104Z	0.1 16V	[M]
C8606	ECJ0EF1C104Z	0.1 16V	[M]
C8607	ECJ0EB0J224K	0.22 6.3V	[M]
C8611	ECJ0EF1C104Z	0.1 16V	[M]
C8621	ECJ0EC1H120J	12P 50V	[M]
C8622	ECJ0EC1H120J	12P 50V	[M]
C8651	ECJ0EF1C104Z	0.1 16V	[M]
C8652	ECJ0EF1C104Z	0.1 16V	[M]
C8691	ECJ0EF1C104Z	0.1 16V	[M]
C8695	ECJ0EF1C104Z	0.1 16V	[M]

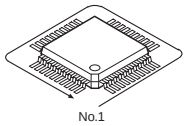
25. Schematic Diagram for printing with letter size

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Timer 1 check	Timer 1 check Laser operation timer Operation time is measured separately for DVD laser and CD laser. Press "FL Display" button for next page of FL Display	 Shown to the left is DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	In STOP (no disc) mode, press STOP button on the player, and "▲" button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 1 reset	Timer 1 reset Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	T1_0000/0000 (display1/display2)	While displaying Timer 1 data, press STOP button on the player, and "▼" button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 check	Timer 2 check Spindle motor operation timer Press "FL Display" button for next page of FL Display	 Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999".	In STOP (no disc) mode, press STOP button on the player, and "▶" button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 reset	Timer 2 reset Spindle motor operation timer Press "FL Display" button for next page of FL Display	T2_00000	While displaying Timer 2 data, press STOP button on the player, and "◀" button on the remote control unit. Cancelled automatically 5 seconds later.



C0ABCB000088 (14p)
C0CBCBD00018 (8p)
C0FBBK000050 (28p)
C0JBAB000011 (14p)
C0JBAR000326 (16p)

C3ABPG000133 (54p)
C3EBEG000073 (8p)
C3EBGC000044 (8p)
C9ZB00000461 (132p)



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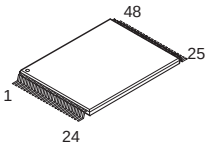

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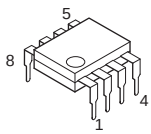

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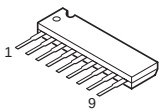

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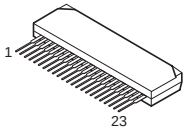

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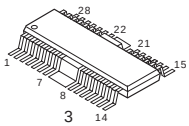

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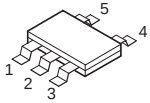

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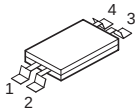

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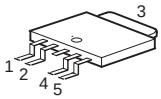

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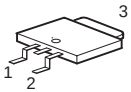

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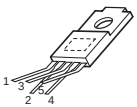

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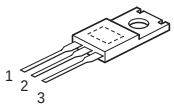

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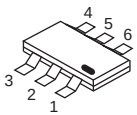

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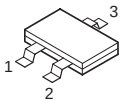

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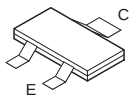

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UNR521100L
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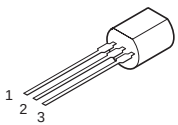

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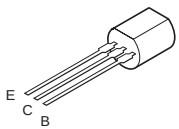

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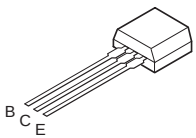

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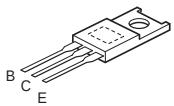
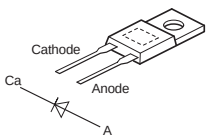
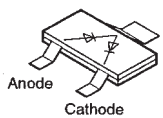


B0HFRJ000012



B0ADCJ000020



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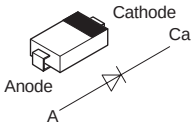
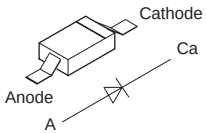
B0ACCK000005
B0JCAE000001

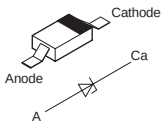


MA2J11100L
MAZ82200ML



B0BC01200019
B0BC01700015
B0BC02900004
B0BC035A0007
B0BC2R4A0006
B0BC3R400001
B0BC3R700004

B0BC4R0A0006
B0BC7R500001
B0JCPD000025



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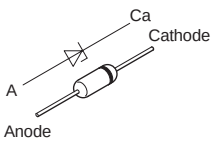

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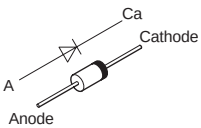

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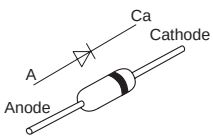

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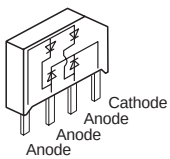

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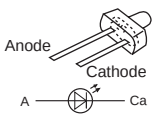
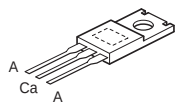


B0HBSM000043



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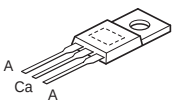
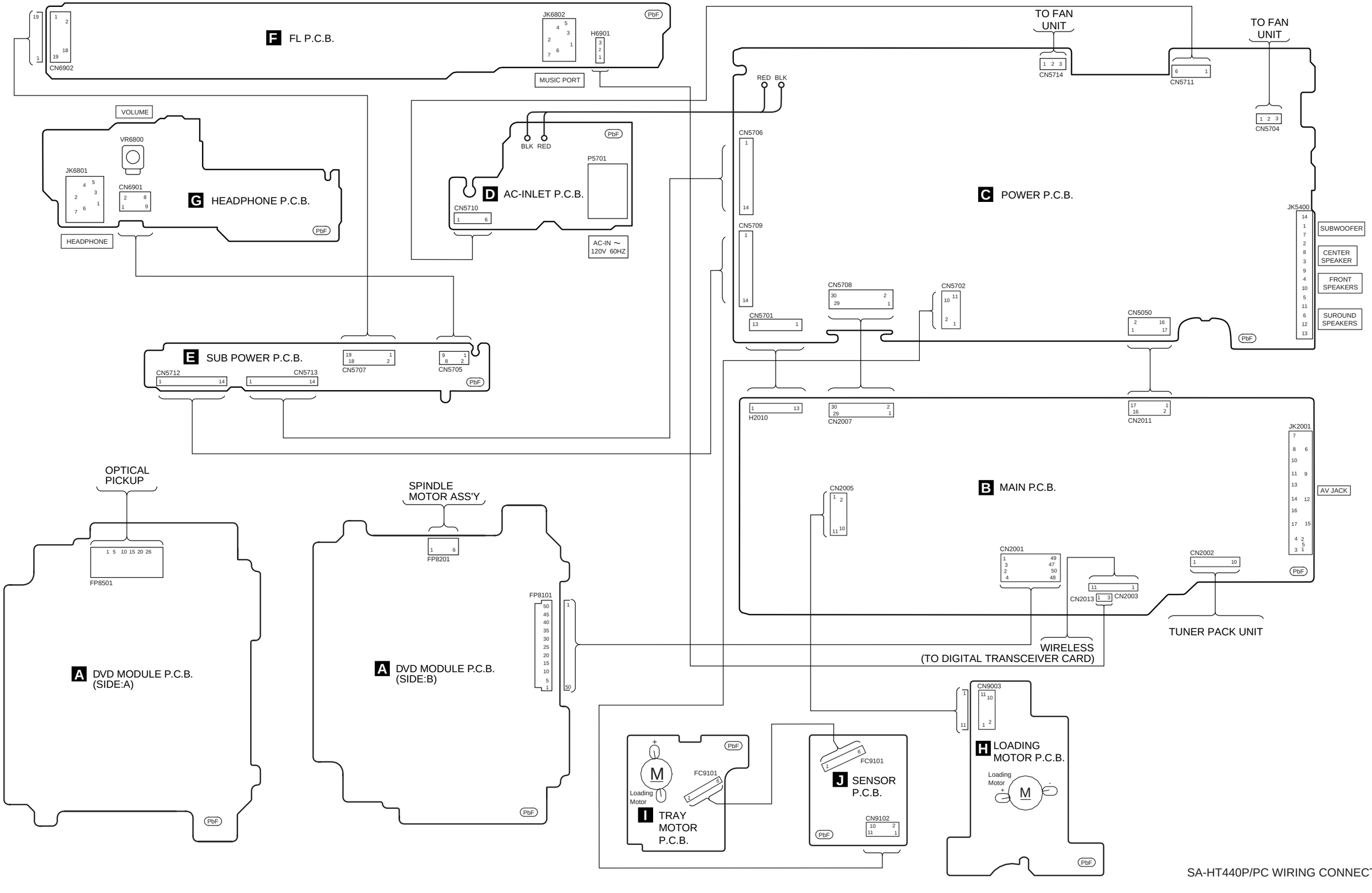
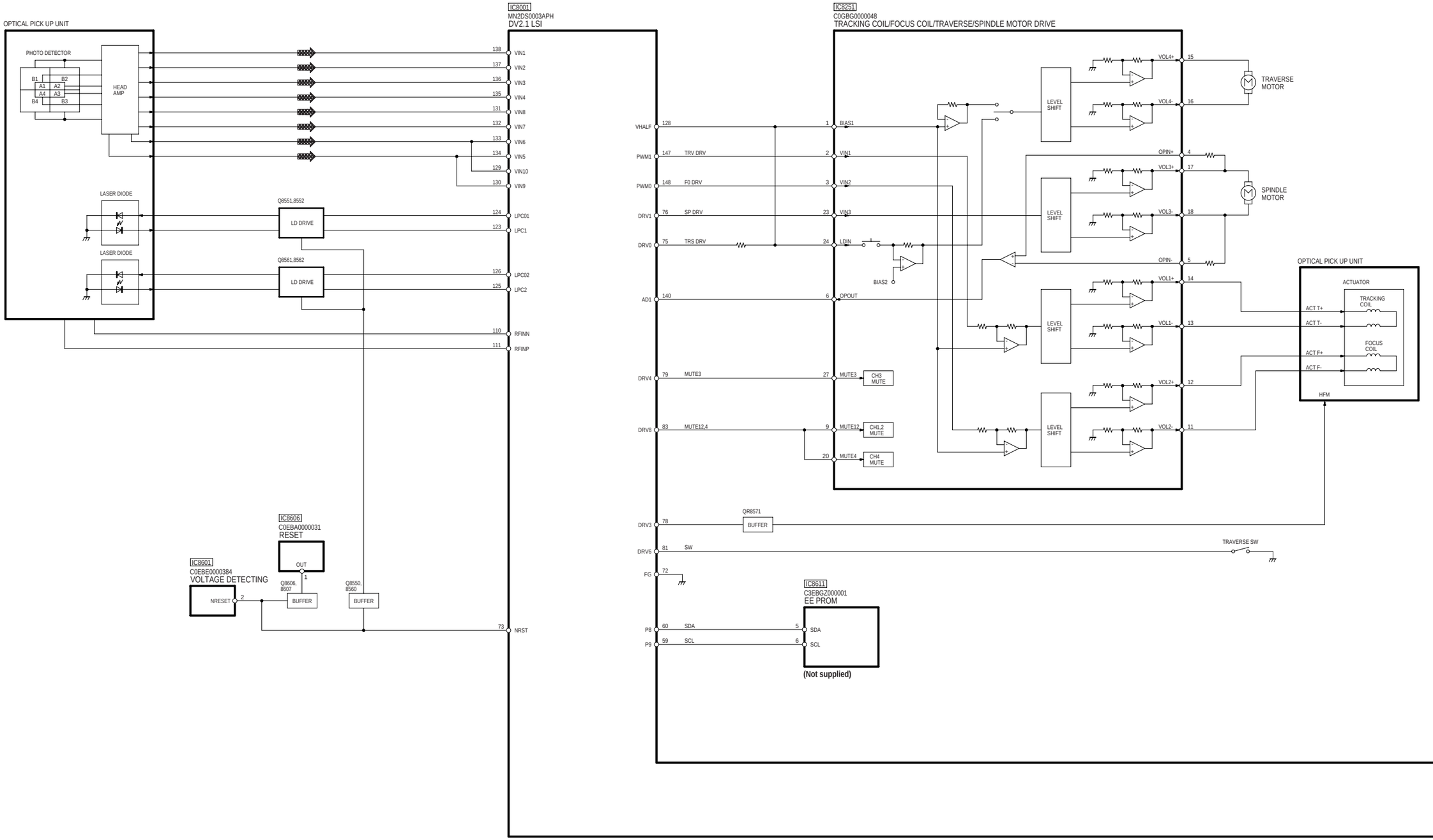
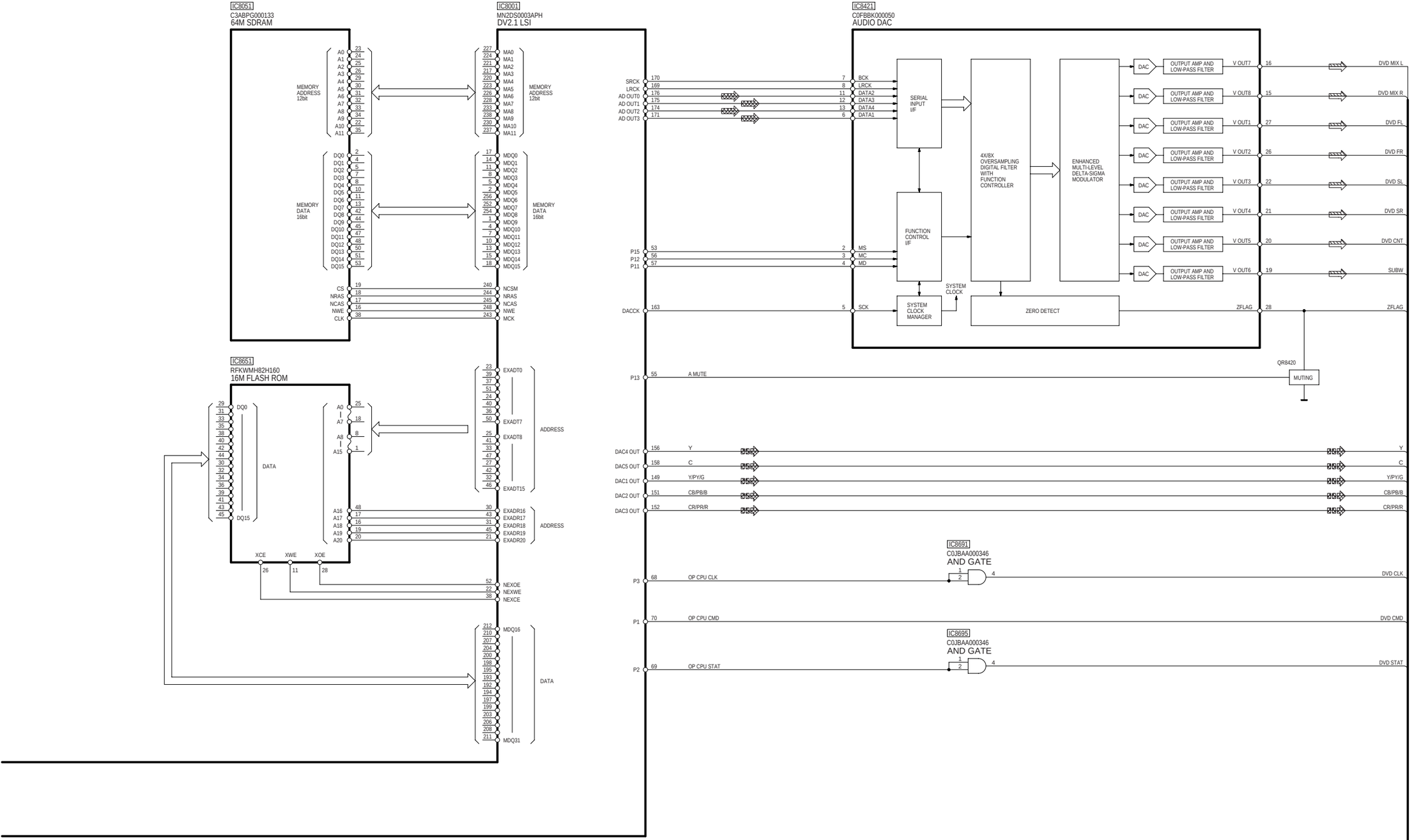




SA-HT440P/PC WIRING CONNECTION


OPTICAL PICK UP UNIT
PHOTO DETECTOR
B1
B2
A1
A2
A4
A3
B4
B3
HEAD AMP
LASER DIODE
LASER DIODE
Q8551,8552
LD DRIVE
Q8561,8562
LD DRIVE
IC8001
MN2DS0003APH
DV2.1 LSI
138 VIN1
137 VIN2
136 VIN3
135 VIN4
131 VIN8
132 VIN7
133 VIN6
134 VIN5
129 VIN10
130 VIN9
124 LPC01
123 LPC1
126 LPC02
125 LPC2
110 RFINN
111 RFINP
73 NRST
IC8606
C0EBA0000031
RESET
OUT
1
IC8601
C0EBE0000384
VOLTAGE DETECTING
NRESET
2
Q8606, 8607
BUFFER
Q8550, 8560
BUFFER
IC8251
C0GBG0000048
TRACKING COIL/FOCUS COIL/TRAVERSE/SPINDLE MOTOR DRIVE
VHALF 128
PWM1 147 TRV DRV
PWM0 148 F0 DRV
DRV1 76 SP DRV
DRV0 75 TRS DRV
AD1 140
DRV4 79 MUTE3
DRV8 83 MUTE12,4
1 BIAS1
2 VIN1
3 VIN2
23 VIN3
24 LDIN
BIAS2
6 OPOUT
27 MUTE3
CH3 MUTE
9 MUTE12
CH1,2 MUTE
20 MUTE4
CH4 MUTE
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
VOL4+ 15
VOL4- 16
OPIN+ 4
VOL3+ 17
VOL3- 18
OPIN- 5
VOL1+ 14
VOL1- 13
VOL2+ 12
VOL2- 11
TRAVERSE MOTOR
SPINDLE MOTOR
OPTICAL PICK UP UNIT
ACTUATOR
TRACKING COIL
FOCUS COIL
ACT T+
ACT T-
ACT F+
ACT F-
HFM
DRV3 78
QR8571
BUFFER
DRV6 81 SW
TRAVERSE SW
FG 72
IC8611
C3EBGZ000001
EE PROM
P8 60 SDA
P9 59 SCL
5 SDA
6 SCL
(Not supplied)


IC8051
C3ABPG000133
64M SDRAM
MEMORY ADDRESS 12bit
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11
23 24 25 26 29 30 31 32 33 34 22 35
MEMORY DATA 16bit
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15
2 4 5 7 9 10 11 13 42 44 45 47 48 50 51 53
CS NRAS NCAS NWE CLK
19 18 17 16 38
IC8001
MN2DS0003APH
DV2.1 LSI
MEMORY ADDRESS 12bit
227 224 221 217 220 223 226 228 233 238 230 237
MA0 MA1 MA2 MA3 MA4 MA5 MA6 MA7 MA8 MA9 MA10 MA11
MEMORY DATA 16bit
17 14 11 8 5 2 256 252 254 1 4 7 10 13 15 18
MDQ0 MDQ1 MDQ2 MDQ3 MDQ4 MDQ5 MDQ6 MDQ7 MDQ8 MDQ9 MDQ10 MDQ11 MDQ12 MDQ13 MDQ14 MDQ15
240 244 245 248 243
NCSM NRAS NCAS NWE MCK
IC8651
RFKWMH82H160
16M FLASH ROM
DQ0 DQ15
29 31 33 35 38 40 42 44 30 32 34 36 39 41 43 45
DATA
A0 A7 A8 A15
25 18 8 1
ADDRESS
XCE XWE XOE
26 11 28
23 39 37 51 24 40 36 50 25 41 33 47 27 42 32 46
EXADT0 EXADT7 EXADT8 EXADT15
A16 A17 A18 A19 A20
48 17 16 19 20
30 43 31 45 21
EXADR16 EXADR17 EXADR18 EXADR19 EXADR20
52 22 38
NEXOE NEXWE NEXCE
212 210 207 204 200 198 195 193 192 194 197 199 203 206 208 211
MDQ16 MDQ31
IC8421
C0FBBK000050
AUDIO DAC
SRCK LRCK AD OUT0 AD OUT1 AD OUT2 AD OUT3
170 169 176 175 174 171
7 8 11 12 13 6
BCK LRCK DATA2 DATA3 DATA4 DATA1
SERIAL INPUT I/F
FUNCTION CONTROL I/F
P15 P12 P11
53 56 57
2 3 4
MS MC MD
DACCK
163
5
SCK
SYSTEM CLOCK MANAGER
SYSTEM CLOCK
4X/8X OVERSAMPLING DIGITAL FILTER WITH FUNCTION CONTROLLER
ENHANCED MULTI-LEVEL DELTA-SIGMA MODULATOR
ZERO DETECT
DAC
OUTPUT AMP AND LOW-PASS FILTER
V OUT7 V OUT8 V OUT1 V OUT2 V OUT3 V OUT4 V OUT5 V OUT6
16 15 27 26 22 21 20 19
DVD MIX L DVD MIX R DVD FL DVD FR DVD SL DVD SR DVD CNT SUBW
ZFLAG
28
ZFLAG
P13
55
A MUTE
QR8420
MUTING
DAC4 OUT DAC5 OUT DAC1 OUT DAC2 OUT DAC3 OUT
156 158 149 151 152
Y C Y/PY/G CB/PB/B CR/PR/R
IC8691
C0JBAA000346
AND GATE
P3
68
OP CPU CLK
DVD CLK
P1
70
OP CPU CMD
DVD CMD
IC8695
C0JBAA000346
AND GATE
P2
69
OP CPU STAT
DVD STAT

SA-HT440P/PC BLOCK DIAGRAM

TUNER PACK

FM ANT

AM ANT

MIXER

RF AMP

OSC

BUFFER

FM IF AMP

AM ANT COIL

AM OSC COIL

+B

+B (FM)

Rch

TUN L

FM/AM IF AMP, DET/AM OSC MIX /FM MPX (LA1833NMNTLM)

DET OUT

ALC

AM OSC

BUFFER

AM MIX

AM RM AMP

AGC

DECODER

PHASE DET

PILOT CANCEL

LEVEL DET

S-CURVE

STEREO SWITCH

FM IF

AM/FM IF BUFFER

AM IF

AM DET

FM DET

COMP

VCO

TUNING DRIVE

FF

FF

FF

PILOT DET

REG

REG

SD

ST

AM IFT

PLL FREQUENCY SYNTHESIZER (LC7213MDTRM)

PHASE DETECTOR CHARGE PUMP

REFERENCE DIVIDER

X103

UNLOCK DETECTOR

SWALLOW COUNTER 1/6,1/17,4 BITS

1/2

12 BITS PROGRAMMABLE DIVIDER

UNIVERSAL COUNTER

POWER ON RESET

SHIFT REGISTER LATCH

C2B I/F

DO

CE

DI

CL

ST/DO

SD

POWER SUPPLY (FM ON)

(FM) +B

IC2801

C9ZB00000461

VIDEO BUFFER

Y/PY/G

CB/PB/B

CR/PR/R

Y

C

CY IN

CB IN

CR IN

Y IN

CV IN

C IN

SEL

MUTE 1

MUTE 2

VCC 1

GND

GND2

BIAS

CLAMP

6dB

12 MHz LPF

6 MHz LPF

75Ω

CY OUT

CB OUT

CR OUT

Y OUT

V OUT

C OUT

CY SAG

CB SAG

CR SAG

Y SAG

V SAG

JK2001 Y(RED)

JK2001 CB(GREEN)

JK2001 CR(BLUE)

JK2001 VIDEO OUT

JK2001 S-VIDEO OUT

IC5750

C0GAG0000007

MOTOR DRIVE(TRAY)

TRAY MOTOR

DRIVE

CONTROL

VCC

GND

Q5750

MOTOR DRIVE

Q2001

IC2003

C0GAG0000007

MOTOR DRIVE(LOADING)

LOADING MOTOR

Q9103 PHOTO INTERRUPTOR

Q9102 PHOTO INTERRUPTOR

Q9101 PHOTO INTERRUPTOR

Q9001 PHOTO INTERRUPTOR

Q2006

ZFLAG

S9001

DVD CLK

DVD CMD

DVD STAT

ST/DO

DI

SD

CE

CL

DVD CK

DVD CMD

DVD STA

ST / DO

TU SDA

TU SD

FM DET

TU SCL

LOAD

MUTE DVD

VMUTE

DISC SENSE

PULSE

POS SW

OPEN SW

LOAD REV

LOAD FWD

PWM

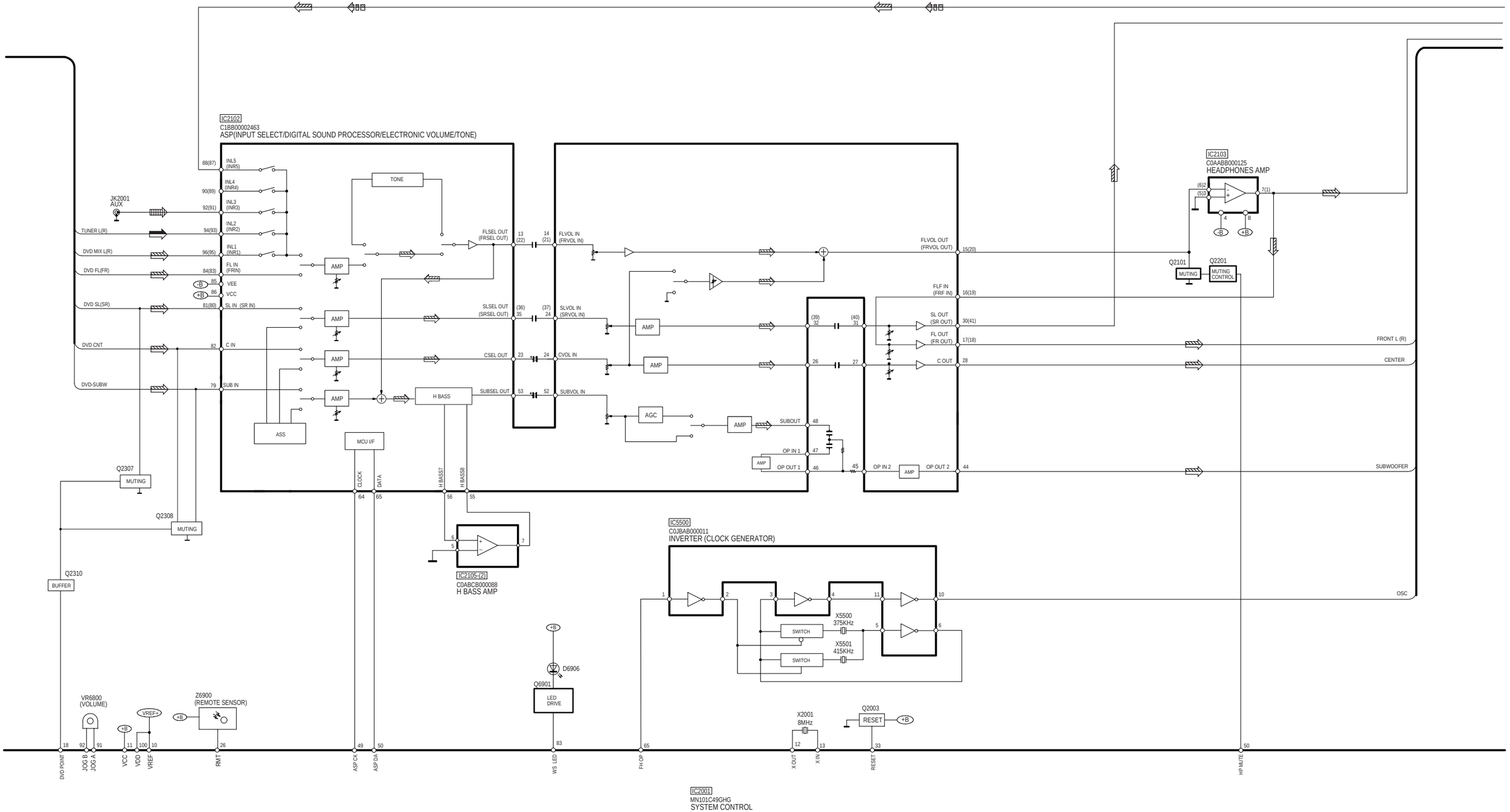
TURN REV

TURN FWD

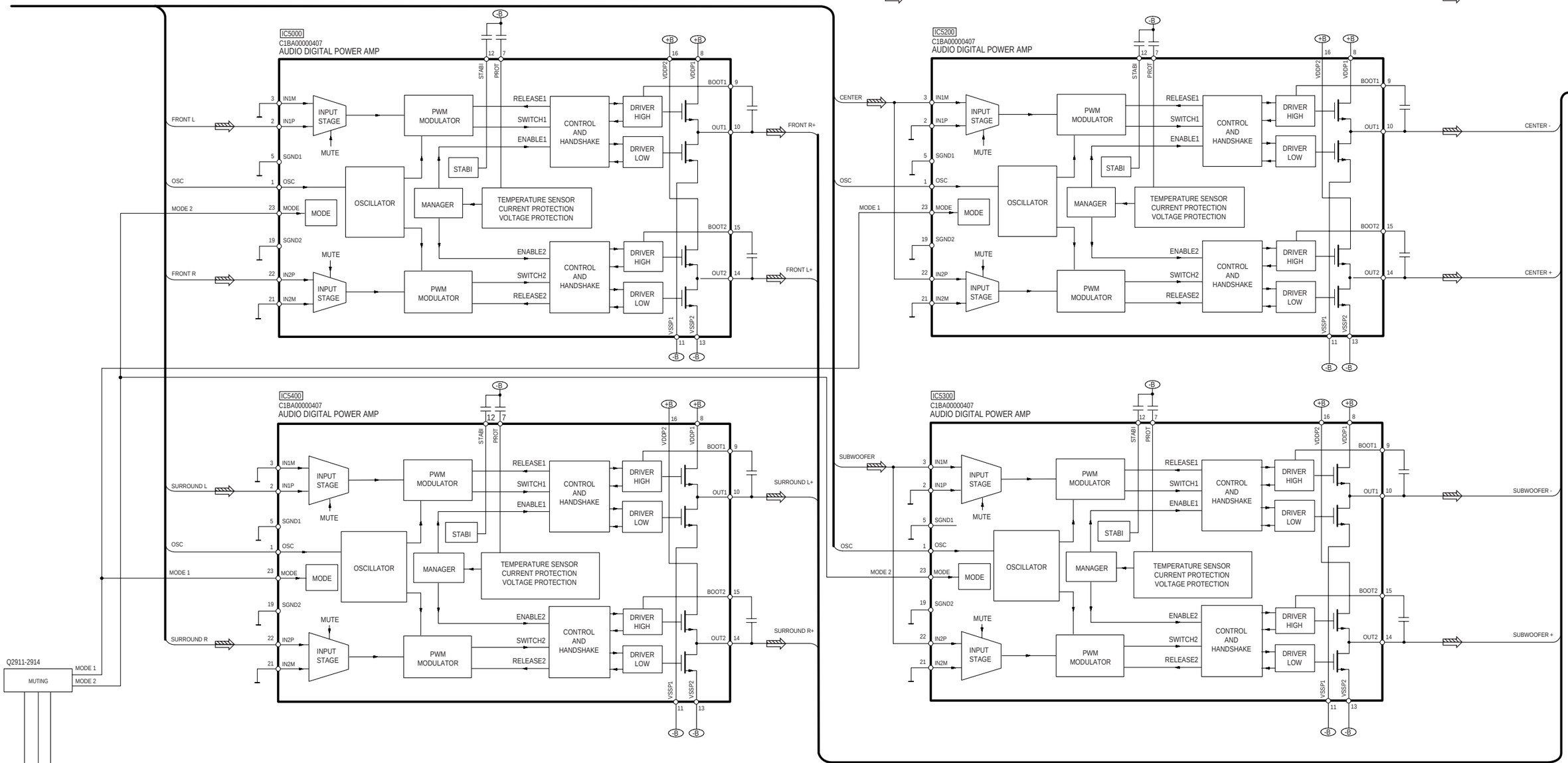
IC2001

MN101C49GHG

SYSTEM CONTROL



SA-HT440P/PC BLOCK DIAGRAM


IC5000
C1BA00000407
AUDIO DIGITAL POWER AMP
IC5200
C1BA00000407
AUDIO DIGITAL POWER AMP
IC5400
C1BA00000407
AUDIO DIGITAL POWER AMP
IC5300
C1BA00000407
AUDIO DIGITAL POWER AMP
-B
+B
STABI
PROT
VDDP2
VDDP1
VSSP1
VSSP2
BOOT1
BOOT2
OUT1
OUT2
IN1M
IN1P
IN2P
IN2M
SGND1
SGND2
OSC
MODE
INPUT STAGE
MUTE
PWM MODULATOR
RELEASE1
SWITCH1
ENABLE1
ENABLE2
SWITCH2
RELEASE2
CONTROL AND HANDSHAKE
DRIVER HIGH
DRIVER LOW
OSCILLATOR
MANAGER
STABI
TEMPERATURE SENSOR
CURRENT PROTECTION
VOLTAGE PROTECTION
FRONT L
FRONT R
FRONT R+
FRONT L+
CENTER
CENTER -
CENTER +
SURROUND L
SURROUND R
SURROUND L+
SURROUND R+
SUBWOOFER
SUBWOOFER -
SUBWOOFER +
MODE 1
MODE 2
Q2911-2914
MUTING
MUTE C
MUTE F
MOD DA
IC2001
MN101C49GHG
SYSTEM CONTROL

IC2105-(1)
C0ABCB000088
MUSICPORT AMP

IC2906
C0JBAR000326
MPORT
SELECTOR

CTRL

JK6802
MUSIC PORT

F-MORT-LCH

CN2003

ROLE CHG

RF PCONT

RF LINK

RF DET

M PORT DET

WIRELSS

Q2098

JK6801
PHONES

JK5400

FRONT L+

FRONT R+

CENTER+

CENTER-

SUBWOOFER+

SUBWOOFER-

SPEAKERS

Q5101, 5102
DC
DETECT

FL6901
FL DISPLAY

IC2004
C3EBEG000073
EEPROM
(Not Supplied)

IC6901
C0HBB0000057
DISPLAY DRIVER

KEY SWITCH
(S6900-6907)

KEY SWITCH
(S6801-6808)

IC2001
MN101C49GHG
SYSTEM CONTROL

SELECT

EDA

ECS

ECK

DC DET

FL DAT

FL CK

FL STB

P CONT

SYNC

AM BP

VSS VSS AVSS HB EN WS EN

SIGNAL LINES

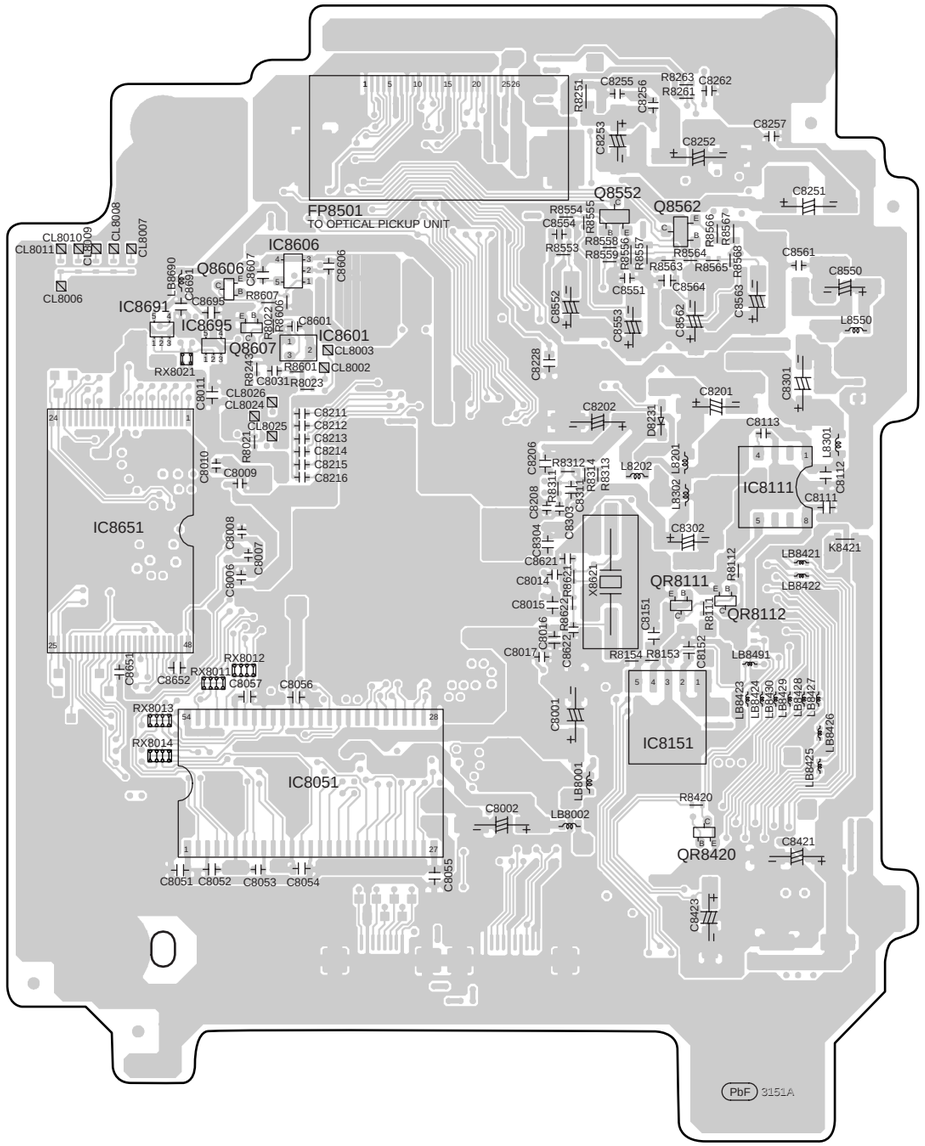
: MAIN SIGNAL LINE
: FM SIGNAL LINE
: FM OSC SIGNAL LINE
: AUX SIGNAL LINE
: AM SIGNAL LINE
: AM OSC SIGNAL LINE
: FM /AM SIGNAL LINE
: MUSIC PORT SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: CD-DA (AUDIO /VIDEO) SIGNAL LINE

( ) Indicates the Pin No. of Right Channel.

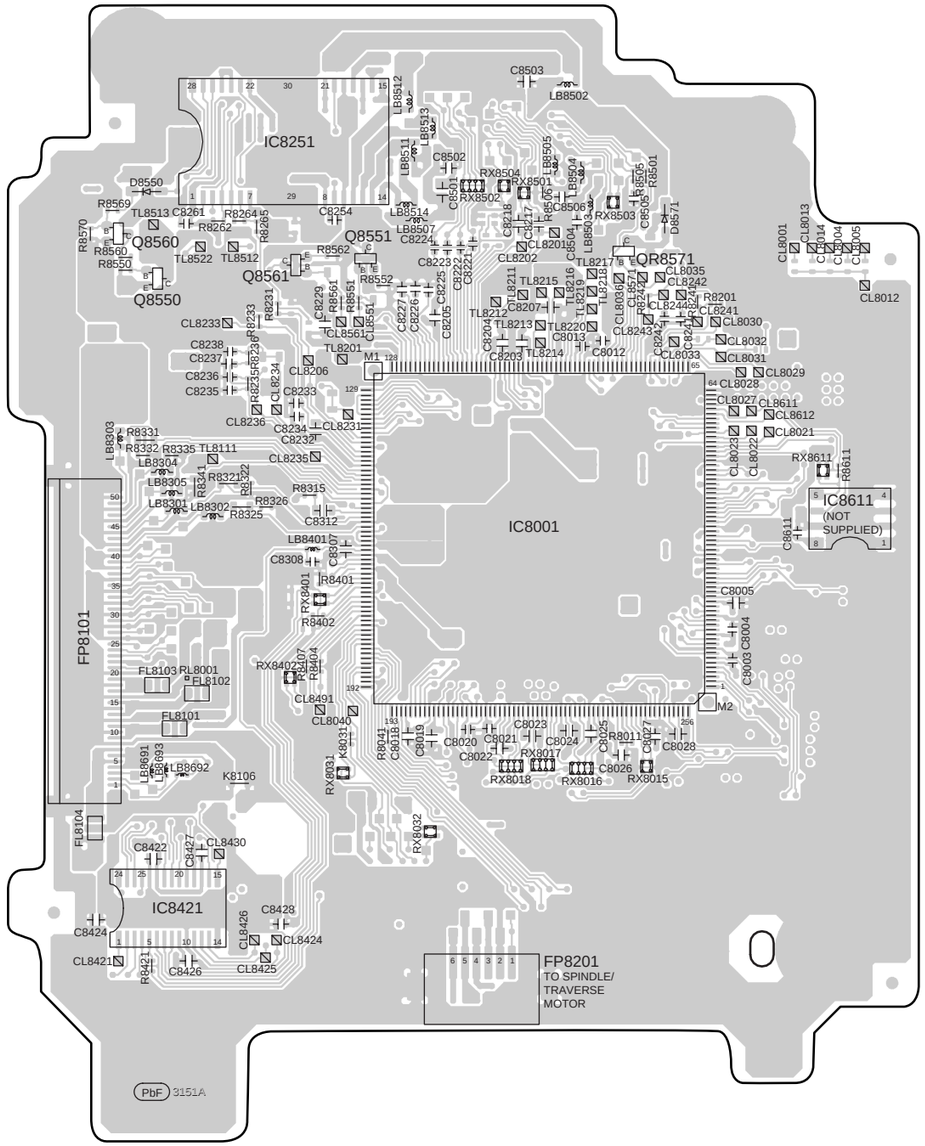
NOTE : Signal Lines are applicable to the Left Channel only.

Q5706,D5713 REGULATOR
Q5746
T5721
BACKUP TRANSFORMER
D5723
IC5721 C0DABYY00002 SWITCHING REGULATOR
8 D
7 D
5 START
2 VCC
4 FB
Q5704 CURRENT LIMITTING SWITCH
PC5721 FEED BACK
Q2903 D2902 +7V REGULATOR
Q2901, Q2909 DC DETECT
Q2906,2907 -7V REGULATOR
TH5702 Q5930-5932 TRANSFORMER TEMP. DETECT
Q5740-5742 Q5744 FAN MOTOR DRIVE
Q5745 FEED BACK
IC2902 C0DAZYY00001 +9V REGULATOR
Q2904 D2915 +5V REGULATOR
IC5702 C0DABFC00002 SHUNT REGULATOR
Q5705
Q5748 SYNC SWITCH
IC2901 C0DAZYY00001 +9V REGULATOR
IC2904 C0CAADE00007 +5V REGULATOR
IC2907 C0CBADG00023 +5V REGULATOR
IC2908 +5V REGULATOR
IC2903 C0DAAMH00012 SWITCHING REGULATOR
IC8111 C0DBZYY00018 +3.3V DC-DC CONVERTER
QR8111, 8112
POWER CONTROL
Q2935, D2912 +2.7V REGULATOR
FP2000
Q5908, D5903, 5904 REGULATOR
IC8151 C0DBEHG00006 +1.2V REGULATOR
T5701
D5711
D5712
D5716
D5748,49
D5741
POWER TRANSFORMER
D5701
L5703
DZ7501
F1
L5701
P5701 AC INLET
Q5701 CURRENT LIMMITTING SWITCH
Q5747 SWITCHING
IC5701 STR-F6628 SWITCHING REGULATOR
VCC
DRAIN
FEED BACK
PC5701 FEED BACK
Q5710 SWITCHING

A DVD MODULE P.C.B. (REP4080A)



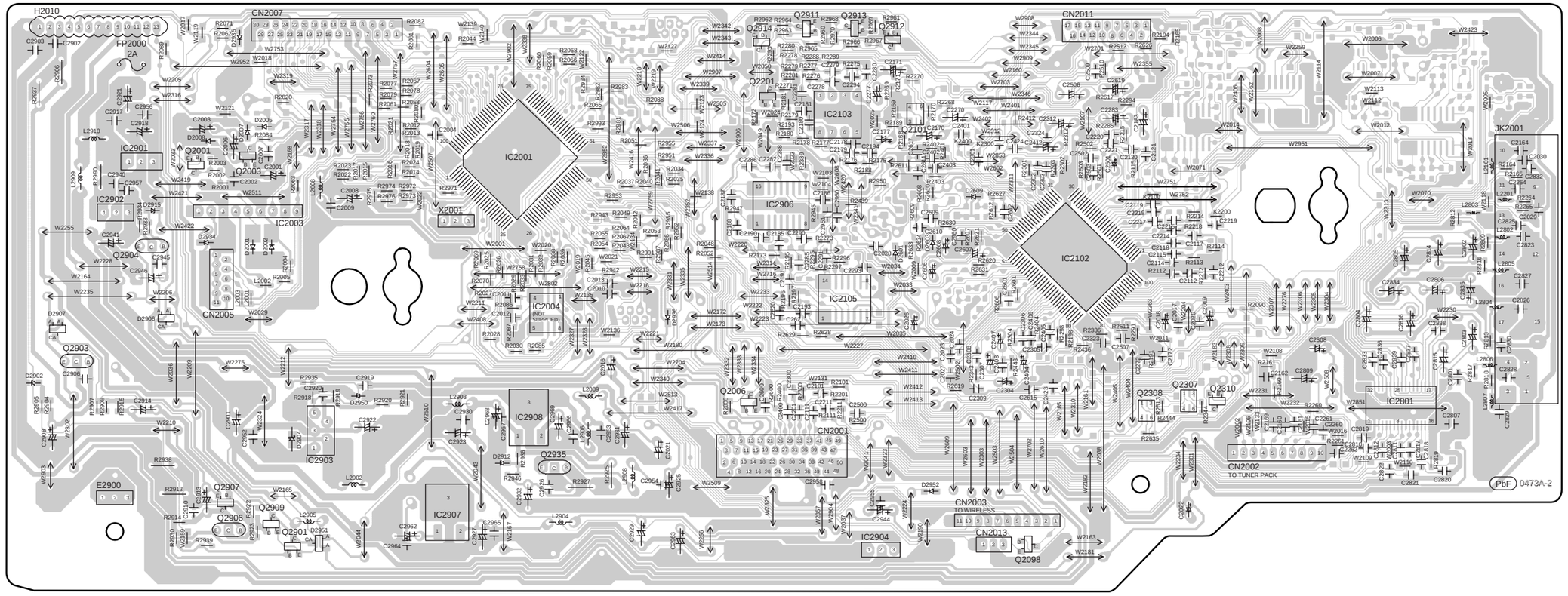
(SIDE A)



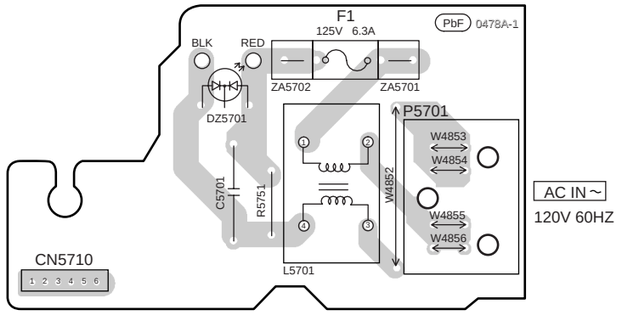
(SIDE B)

SA-HT440P/PC DVD MODULE P.C.B.

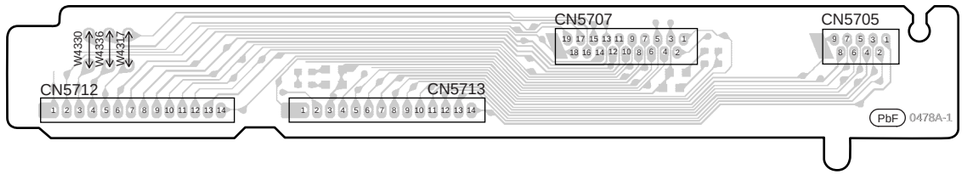
B MAIN P.C.B. (REPX0528A)



D AC-INLET P.C.B. (REPX0529A)

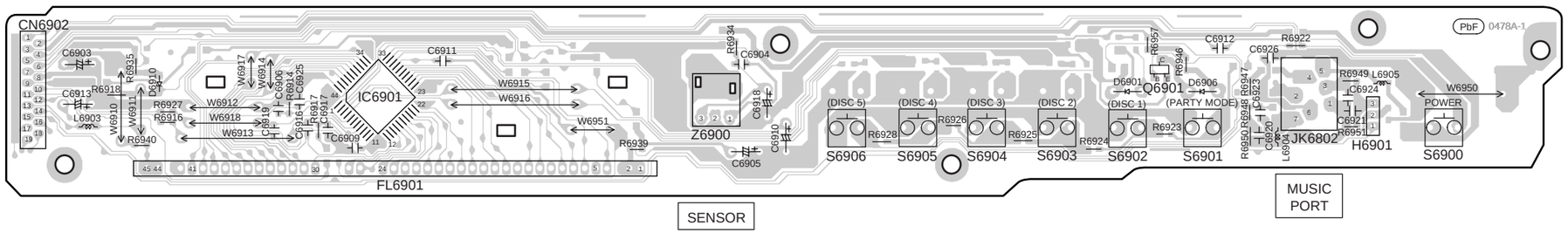


E SUB POWER P.C.B. (REPX0529A)



SA-HT440P/PC MAIN/AC-INLET/SUB-POWER P.C.B.

F FL P.C.B. (REPX0529A)



G HEADPHONE P.C.B. (REPX0529A)

H LOADING MOTOR P.C.B. (REP3465B)

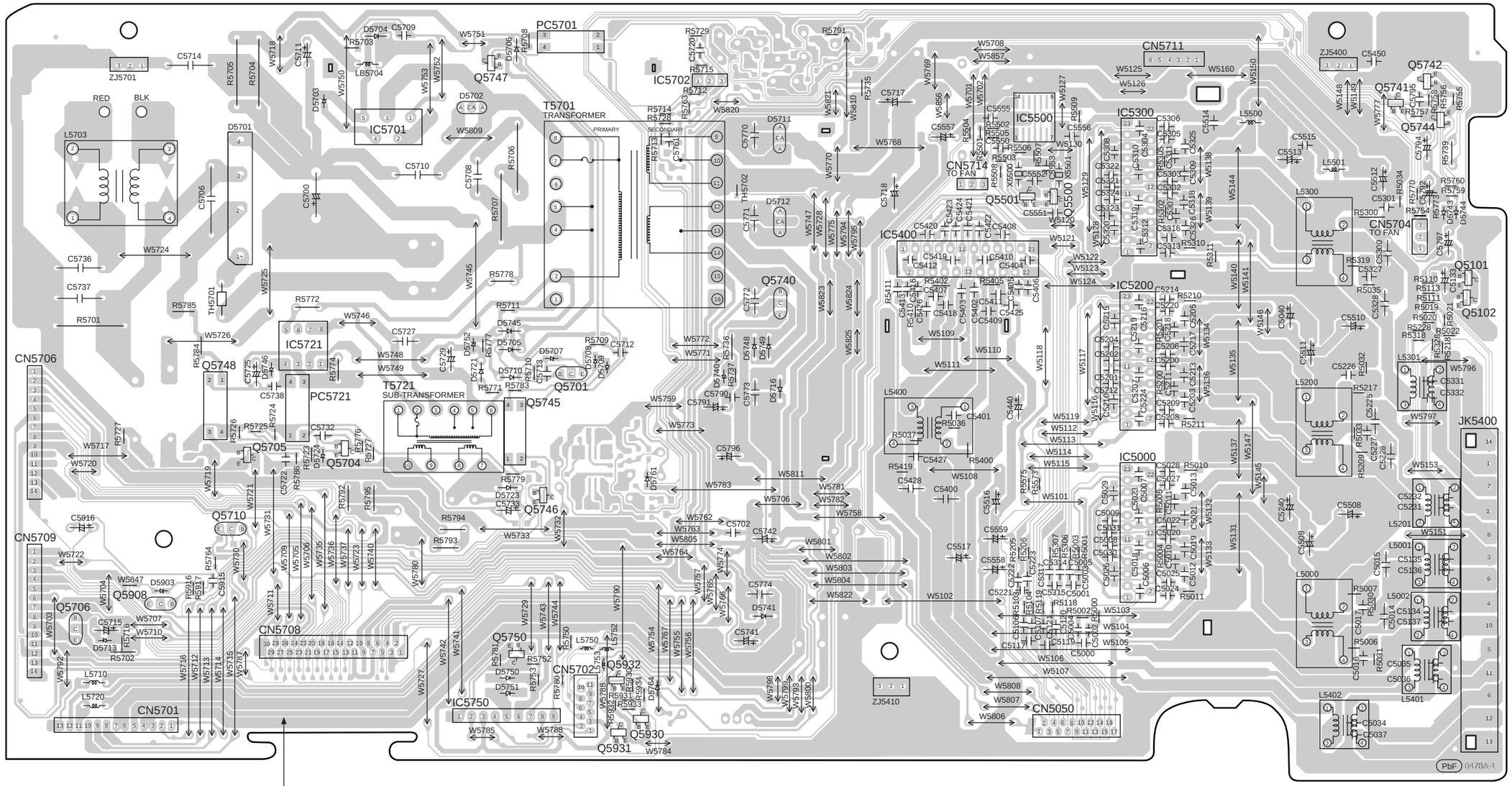
I TRAY MOTOR P.C.B. (REP3466B)

J SENSOR P.C.B. (REP3466B)

A B C D E F G H I J K L M N

1 2 3 4 5 6 7 8 9

C POWER P.C.B. (REPX0529A)

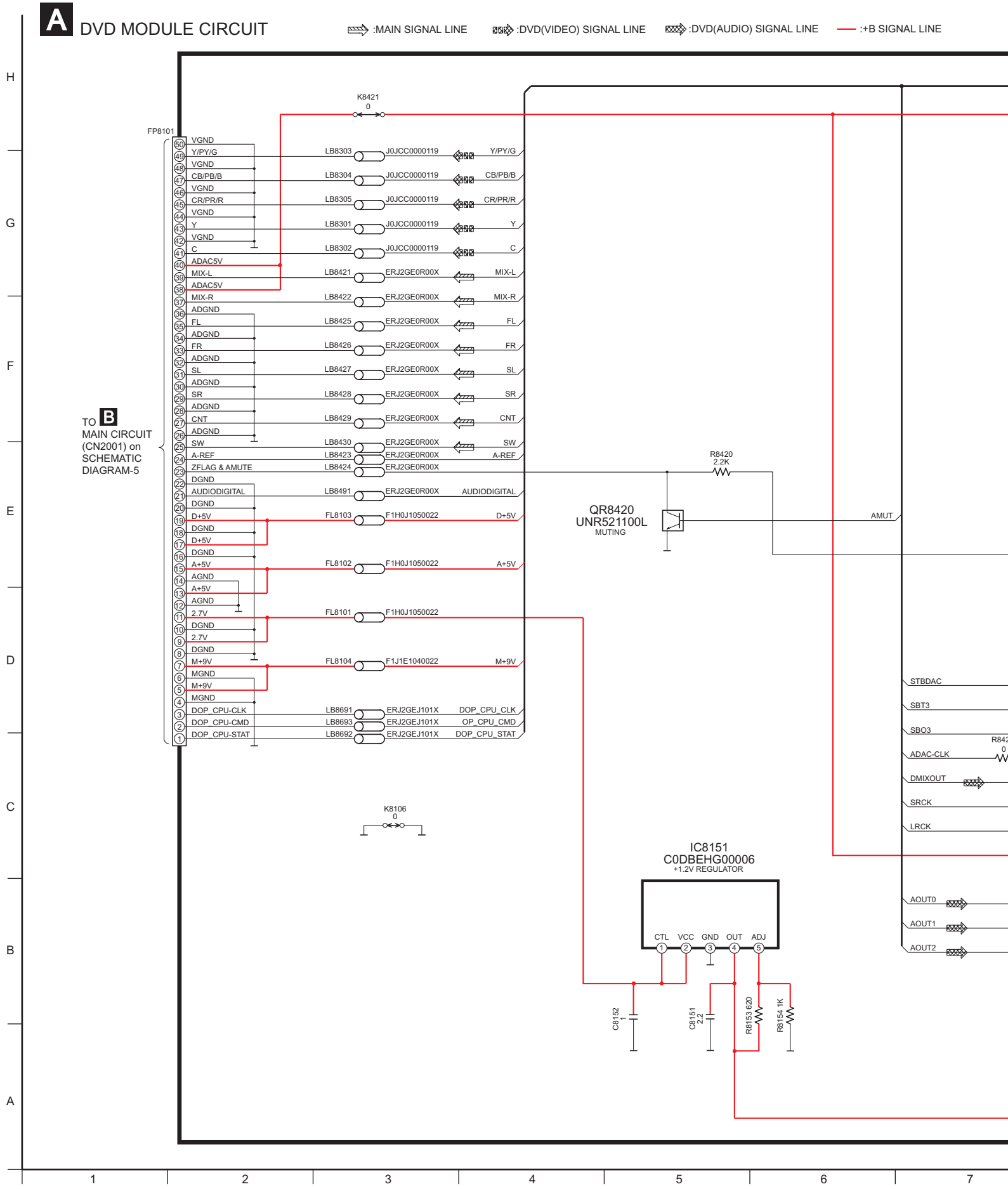

CN5706
ZJ5701
C5714
RED
BLK
L5703
D5701
R5705
R5704
W5718
C5711
D5704
C5709
R5703
LB5504
W5750
D5703
W5753
W5752
IC5701
W5751
PC5701
D5706
R5708
Q5747
D5702
W5809
T5701
TRANSFORMER
PRIMARY
SECONDARY
R5729
C5720
R5715
IC5702
R5712
R5714
R5728
R5713
C5761
R5763
W5820
R5791
W5821
W5810
R5735
C5717
W5769
W5856
W5857
W5708
W5701
W5702
C5555
IC5500
W5127
W5509
C5556
W5130
C5557
R5504
R5501
C5550
R5502
R5505
R5506
R5503
R5507
C5553
X5501
C5552
X5500
C5551
Q5500
W5129
W5120
Q5501
C5718
W5768
W5770
W5747
W5728
W5775
W5794
W5795
C5771
TH5702
D5712
C5770
D5711
C5772
Q5740
W5823
W5824
W5825
W5772
W5771
R5736
R5737
D5748
D5749
C5790
C5791
D5740V
D5716
C5773
W5759
W5773
W5783
W5811
W5781
W5782
W5706
W5758
W5762
W5763
W5805
W5764
C5702
C5742
W5801
W5802
W5803
W5804
W5822
W5102
C5774
D5741
C5741
W5757
W5765
W5766
W5774
W5754
W5767
W5755
W5756
W5790
W5729
W5743
W5744
W5750
L5750
L5752
Q5750
R5781
R5752
R5753
D5750
D5751
CN5702
Q5932
Q5931
Q5930
R5931
R5932
R5933
R5934
D5704
W5784
W5785
W5788
IC5750
W5727
W5742
W5741
W5799
W5793
W5800
ZJ5410
CN5708
CN5709
CN5701
W5722
W5847
D5903
Q5908
Q5706
W5703
W5704
W5707
W5710
C5715
R5716
D5713
R5702
L5710
L5720
W5716
W5712
W5713
W5714
W5715
W5783
C5916
R5916
R5917
C5915
R5764
W5730
W5731
W5709
W5705
W5706
W5735
W5736
W5737
W5723
W5740
Q5710
W5719
W5721
C5722
R5786
R5792
R5795
W5717
W5720
R5727
C5732
R5776
R5724
R5725
R5726
Q5705
Q5704
R5723
D5724
R5727
Q5748
C5725
D5746
C5738
R5774
PC5721
T5721
SUB-TRANSFORMER
W5748
W5749
W5746
C5727
C5729
R5772
W5726
W5725
TH5701
R5785
R5701
C5736
C5737
W5724
C5706
C5700
C5710
C5708
R5706
R5707
R5778
R5711
D5745
D5705
D5707
D5710
R5710
R5783
R5771
C5712
R5709
D5709
R5708
Q5701
Q5745
W5727
W5717
W5720
W5719
W5721
W5731
W5709
W5705
W5706
W5735
W5736
W5737
W5723
W5740
W5732
W5733
R5794
R5793
R5780
R5779
D5723
C5739
Q5746
C5796
D5761
W5783
W5811
W5781
W5782
W5706
W5758
W5762
W5763
W5805
W5764
C5702
C5742
W5801
W5802
W5803
W5804
W5822
W5102
C5774
D5741
C5741
W5757
W5765
W5766
W5774
W5754
W5767
W5755
W5756
W5790
W5729
W5743
W5744
W5750
L5750
L5752
Q5750
R5781
R5752
R5753
D5750
D5751
CN5702
Q5932
Q5931
Q5930
R5931
R5932
R5933
R5934
D5704
W5784
W5785
W5788
IC5750
W5727
W5742
W5741
W5799
W5793
W5800
ZJ5410
C5420
C5423
C5424
C5421
C5422
C5408
IC5400
C5419
C5412
C5410
C5404
C5405
C5406
R5411
C5543
C5544
C5545
C5546
C5547
C5548
R5402
C5407
C5418
C5402
C5403
C5411
C5409
C5425
W5109
W5110
W5111
L5400
R5036
C5401
R5037
C5427
R5400
R5419
C5428
C5400
C5440
W5119
W5112
W5113
W5114
W5115
W5101
W5108
R5575
R5573
C5516
C5559
C5558
C5517
C5221
R5265
R5216
C5223
R5307
R5306
R5314
C5308
R5003
R5001
C5005
C5026
C5024
C5315
C5001
R5118
R5002
R5000
C5103
R5103
R5104
C5104
C5102
C5101
C5117
C5119
C5000
W5106
W5107
W5808
W5807
W5806
CN5050
W5103
W5104
W5105
W5117
W5116
C5210
C5211
C5212
C5213
C5214
C5215
C5216
C5217
C5218
C5219
C5220
C5221
C5222
C5223
C5224
C5225
C5226
C5227
C5228
C5229
C5230
C5231
C5232
C5233
C5234
C5235
C5236
C5237
C5238
C5239
C5240
C5241
C5242
C5243
C5244
C5245
C5246
C5247
C5248
C5249

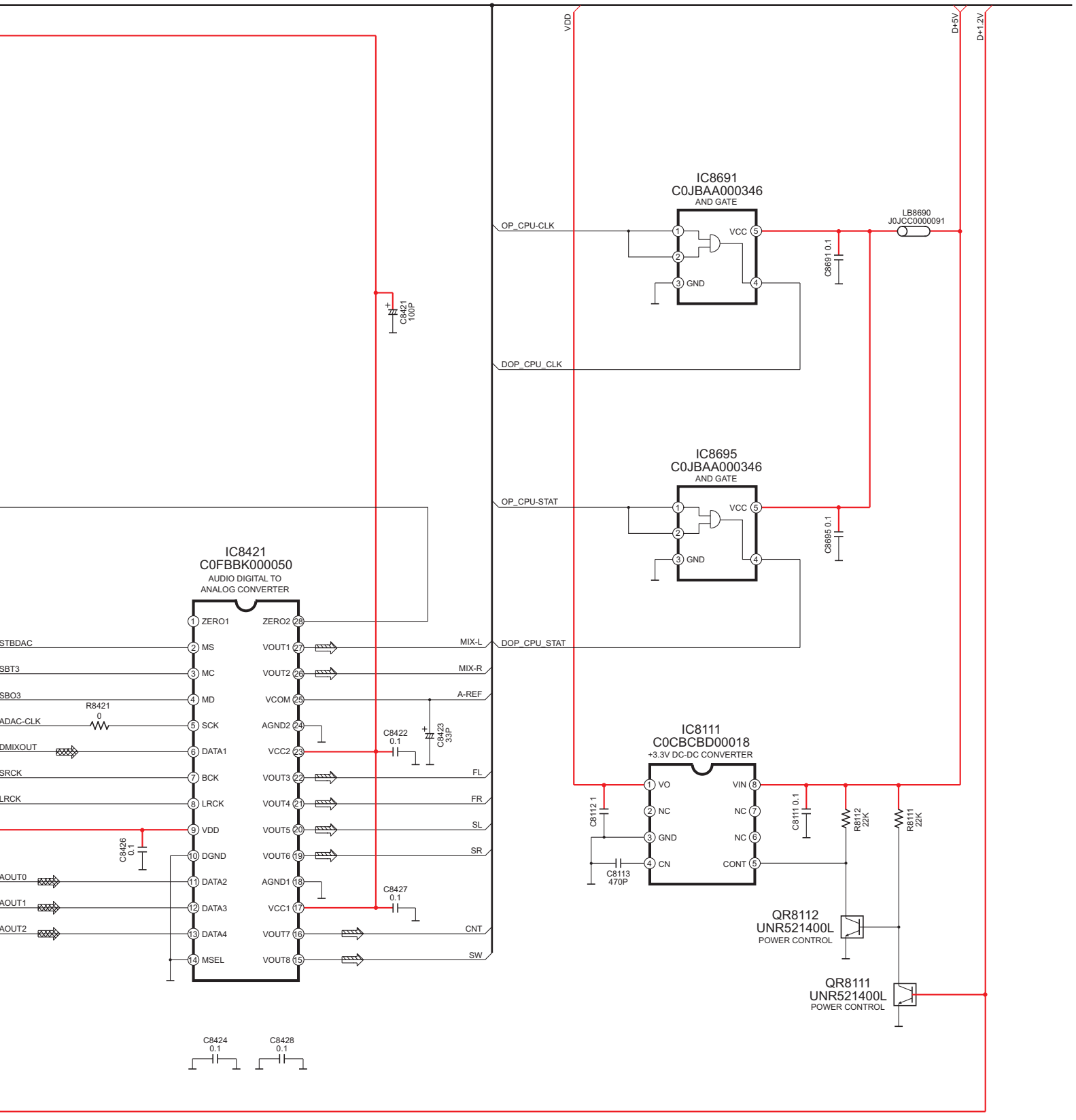
18.1. (A) DVD Module Circuit

SCHEMATIC DIAGRAM-1

A DVD MODULE CIRCUIT

:MAIN SIGNAL LINE :DVD(VIDEO) SIGNAL LINE :DVD(AUDIO) SIGNAL LINE :+B SIGNAL LINE



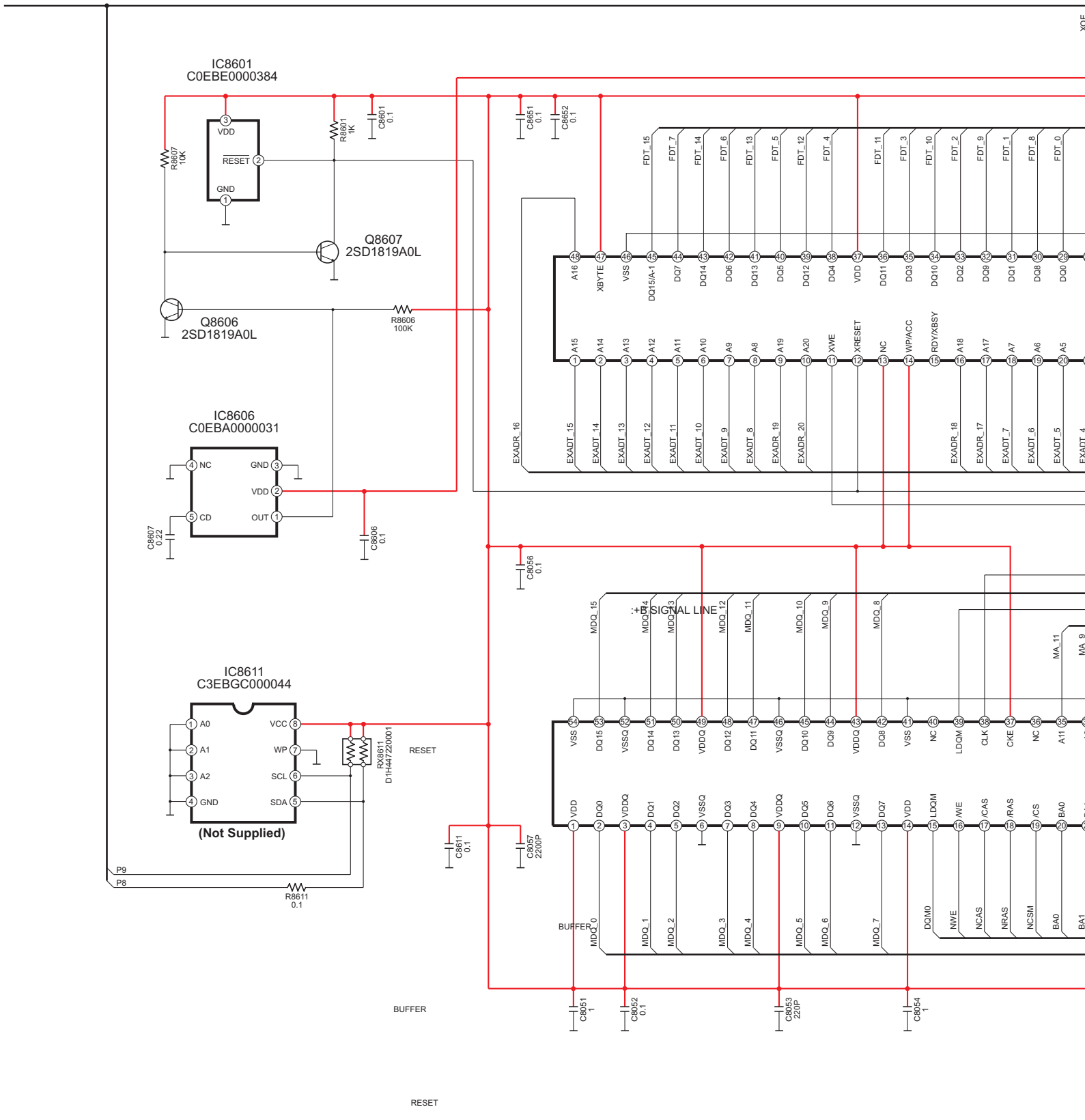


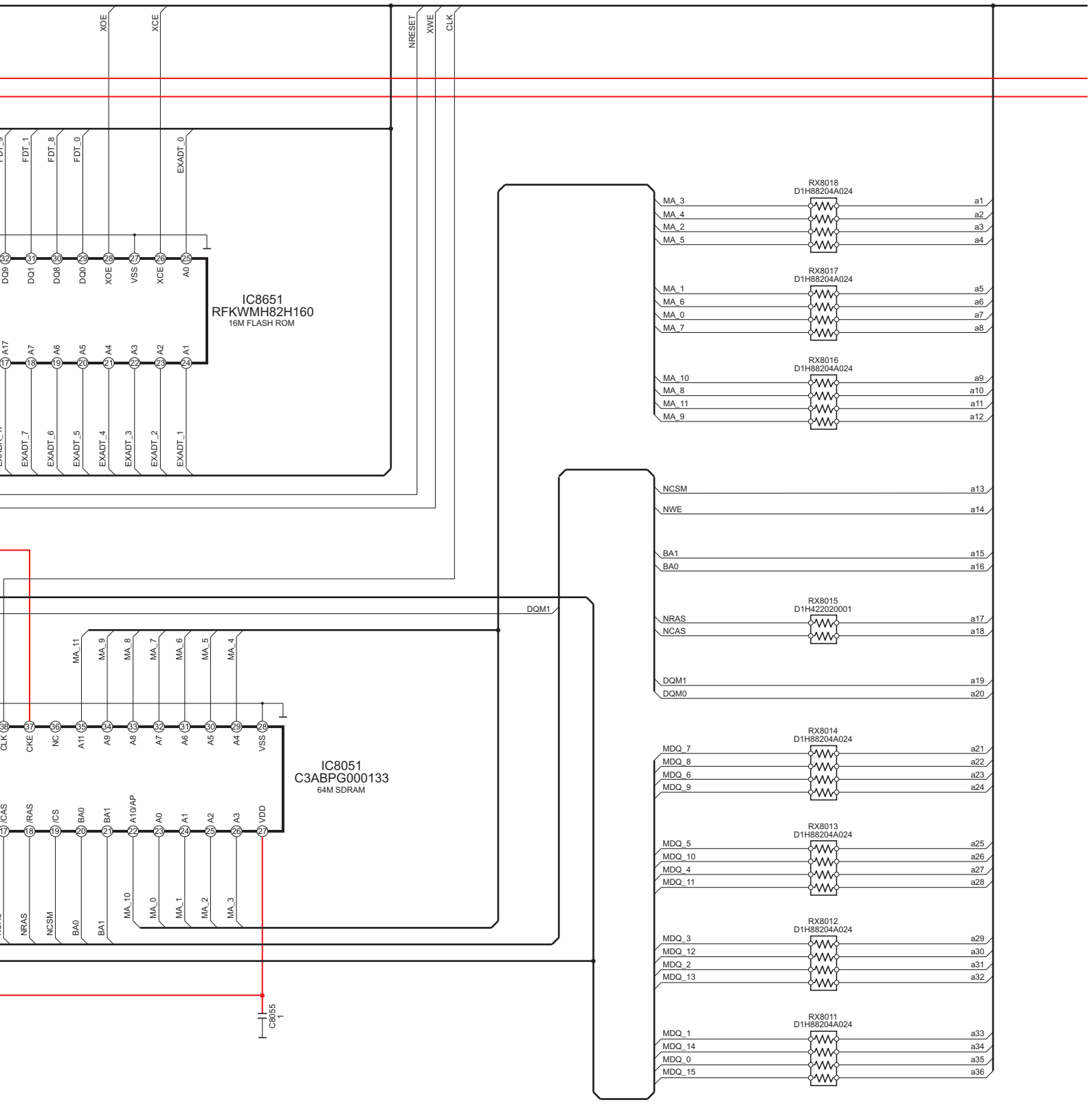
SA-HT440P/PC DVD MODULE CIRCUIT

7 | 8 | 9 | 10 | 11 | 12 | 13

SCHEMATIC DIAGRAM-2

DVD MODULE CIRCUIT

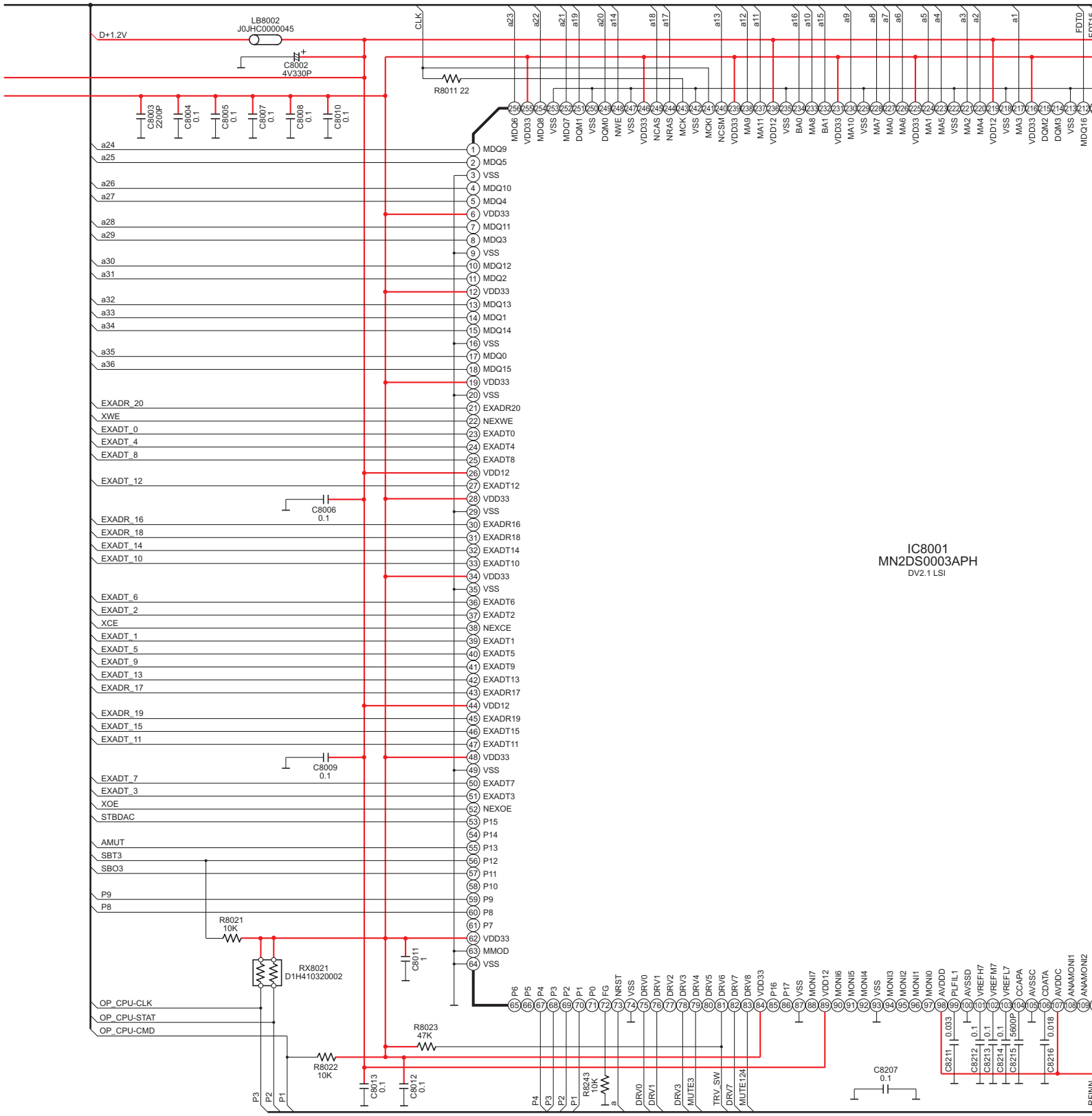


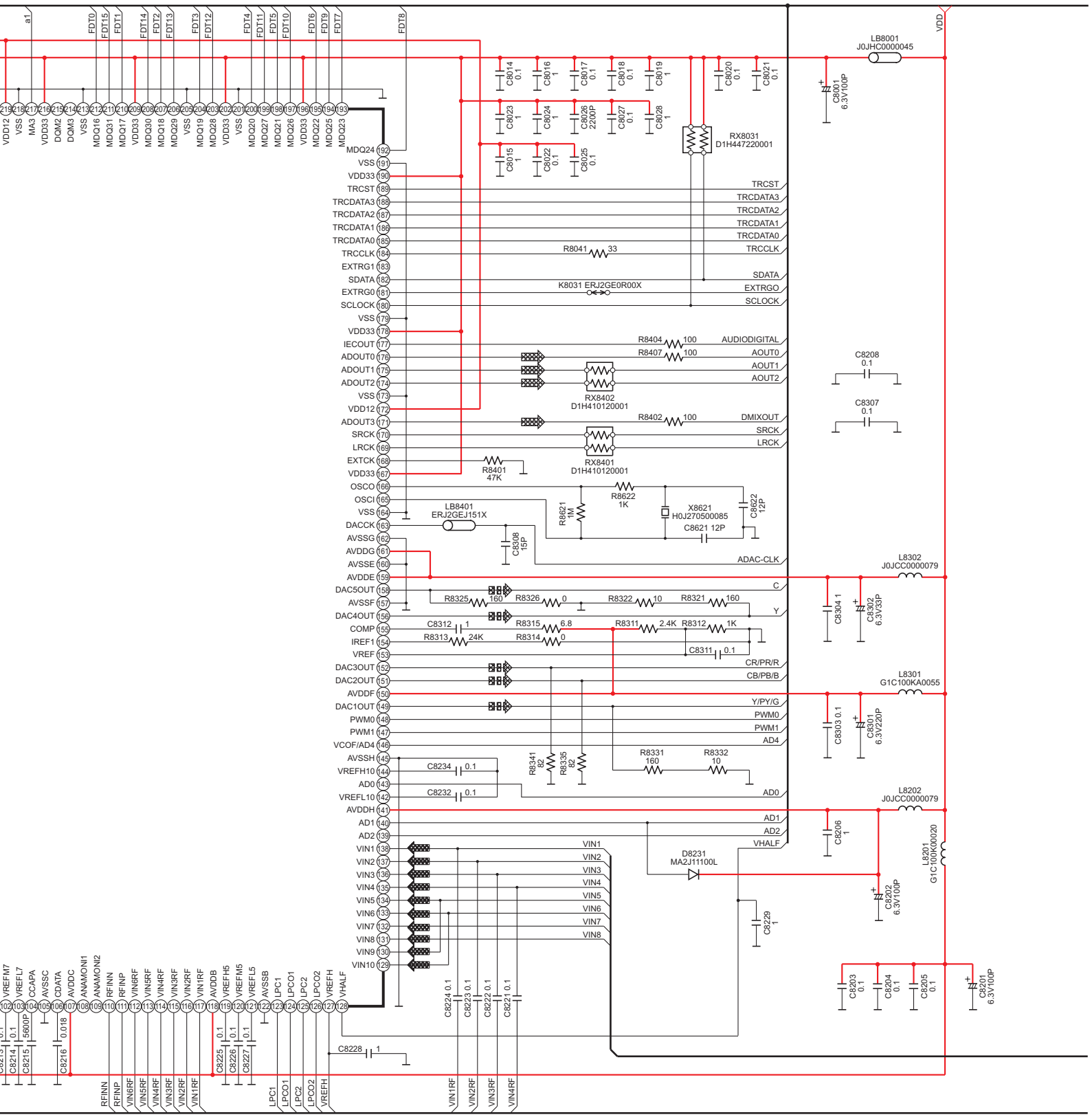

XOE
XCE
NRESET
XWE
CLK
FDT_1
FDT_8
FDT_0
EXADT_0
IC8651
RFKWMH82H160
16M FLASH ROM
DQ9
DQ1
DQ8
DQ0
XOE
VSS
XCE
A0
A17
A7
A6
A5
A4
A3
A2
A1
EXADT_7
EXADT_6
EXADT_5
EXADT_4
EXADT_3
EXADT_2
EXADT_1
RX8018
D1H88204A024
MA_3
MA_4
MA_2
MA_5
a1
a2
a3
a4
RX8017
D1H88204A024
MA_1
MA_6
MA_0
MA_7
a5
a6
a7
a8
RX8016
D1H88204A024
MA_10
MA_8
MA_11
MA_9
a9
a10
a11
a12
NCSM
NWE
a13
a14
BA1
BA0
a15
a16
RX8015
D1H422020001
NRAS
NCAS
a17
a18
DQM1
DQM0
a19
a20
RX8014
D1H88204A024
MDQ_7
MDQ_8
MDQ_6
MDQ_9
a21
a22
a23
a24
RX8013
D1H88204A024
MDQ_5
MDQ_10
MDQ_4
MDQ_11
a25
a26
a27
a28
RX8012
D1H88204A024
MDQ_3
MDQ_12
MDQ_2
MDQ_13
a29
a30
a31
a32
RX8011
D1H88204A024
MDQ_1
MDQ_14
MDQ_0
MDQ_15
a33
a34
a35
a36
DQM1
MA_11
MA_9
MA_8
MA_7
MA_6
MA_5
MA_4
IC8051
C3ABPG000133
64M SDRAM
CLK
CKE
NC
A11
A9
A8
A7
A6
A5
A4
VSS
/CAS
/RAS
/CS
BA0
BA1
A10/AP
A0
A1
A2
A3
VDD
NRAS
NCSM
BA0
BA1
MA_10
MA_0
MA_1
MA_2
MA_3
C8055

SCHEMATIC DIAGRAM-3

A DVD MODULE CIRCUIT

:DVD(AUDIO) SIGNAL LINE :DVD(VIDEO) SIGNAL LINE :CD-DA SIGNAL LINE :+B SIGNAL LINE





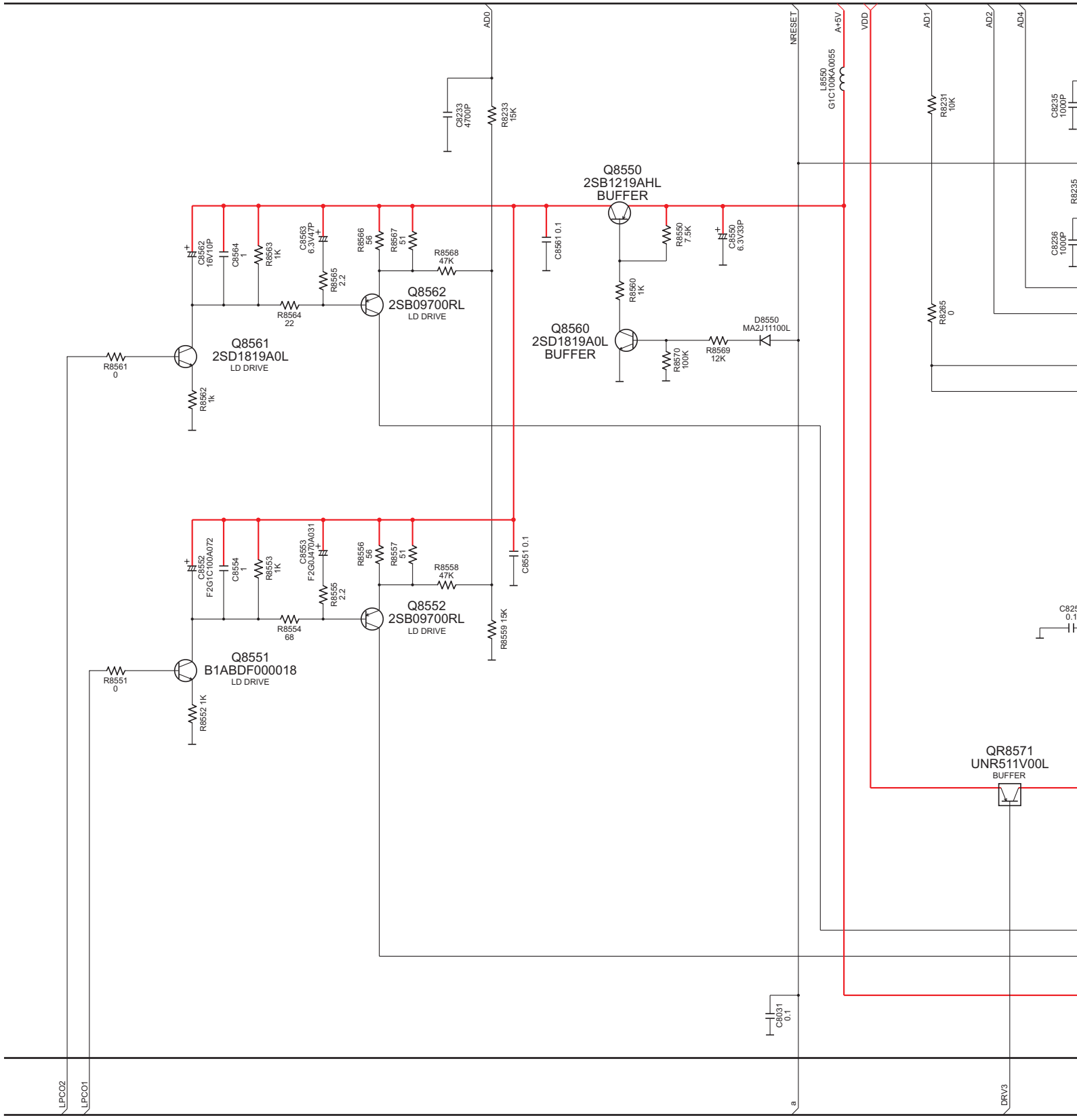
SA-HT440P/PC DVD MODULE CIRCUIT

33	34	35	36	37	38	39

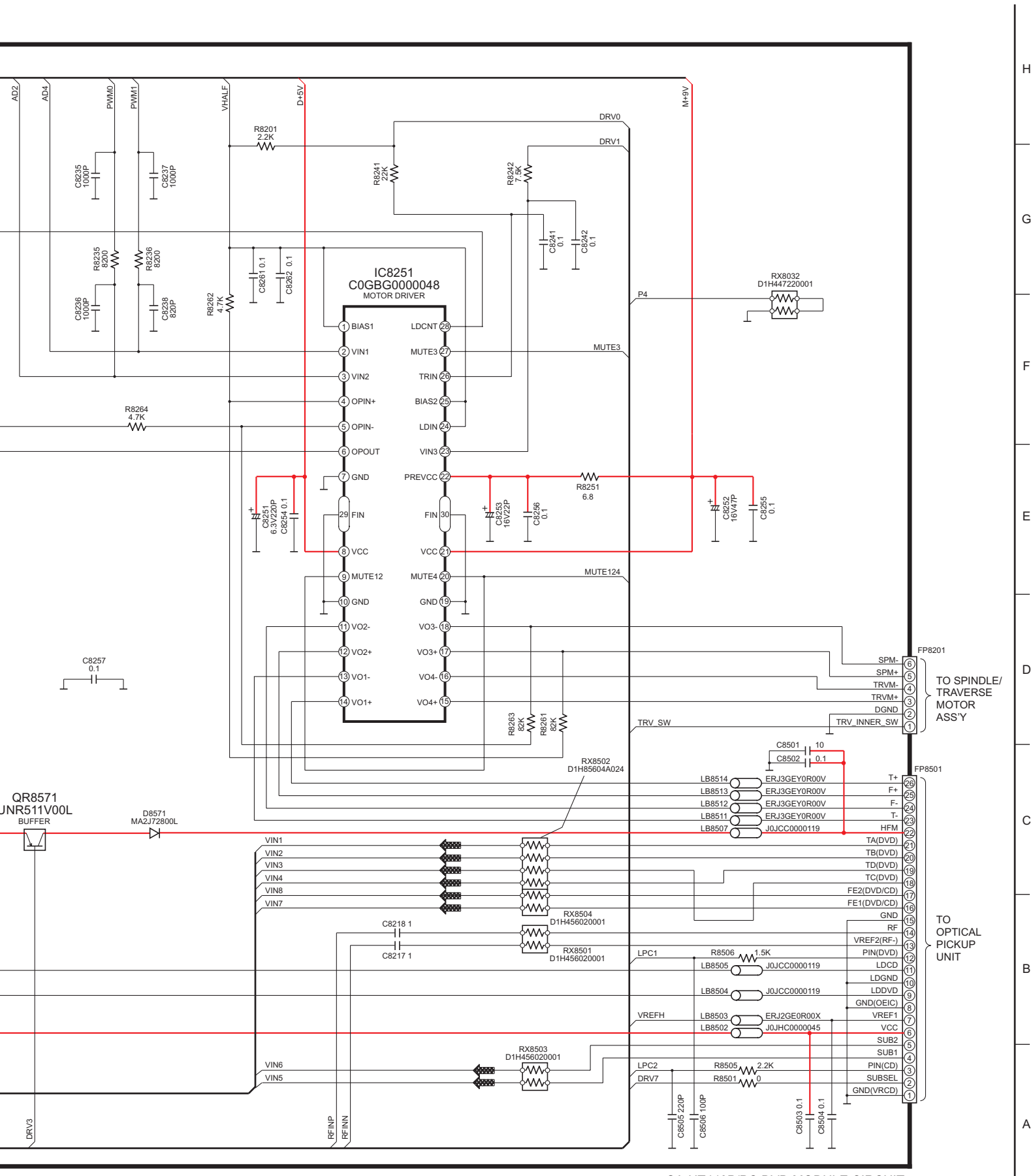
SCHEMATIC DIAGRAM-4

A DVD MODULE CIRCUIT

:CD-DA SIGNAL LINE :+B SIGNAL LINE



40 | 41 | 42 | 43 | 44 | 45 | 46



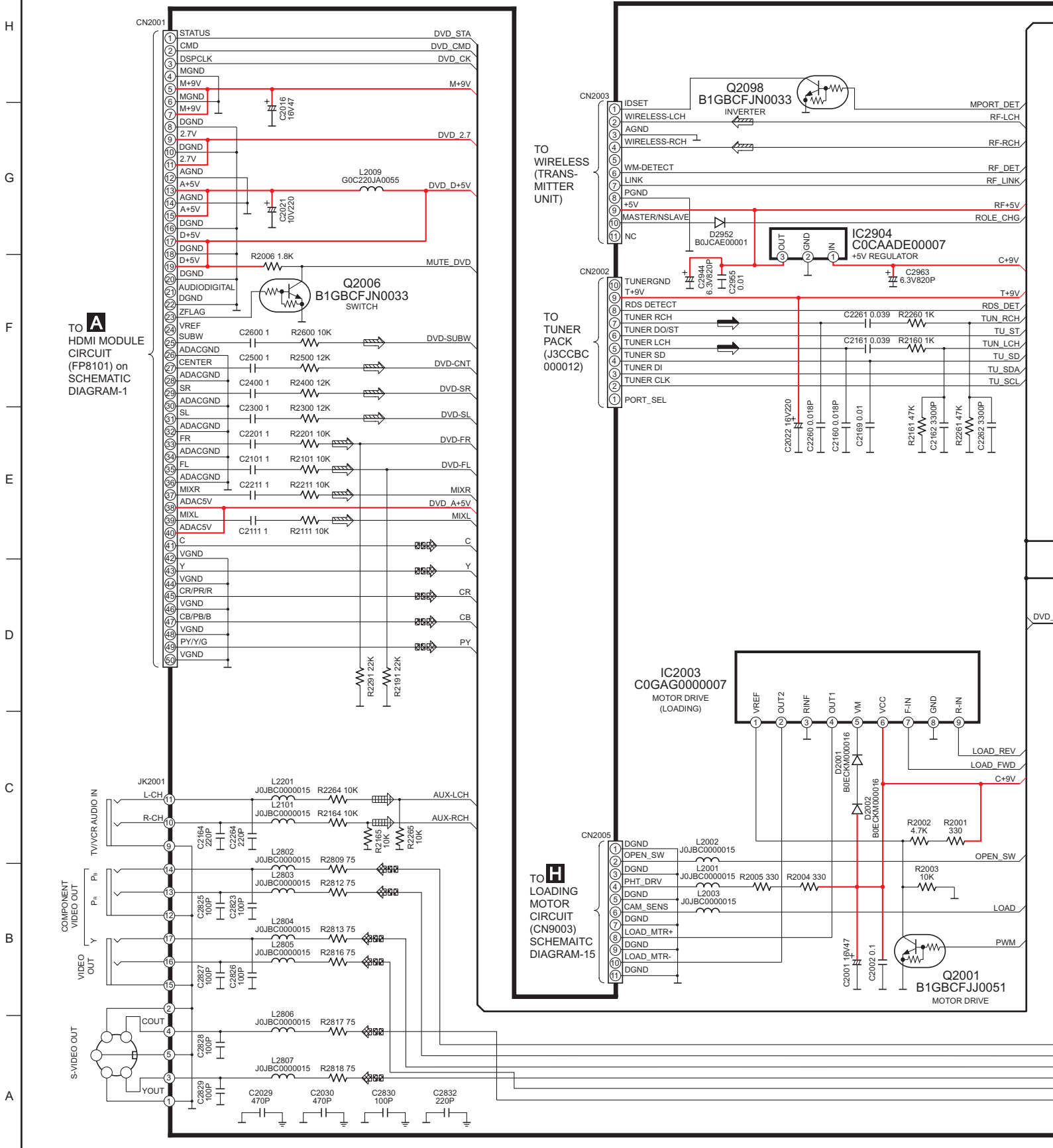
SA-HT440P/PC DVD MODULE CIRCUIT

18.2. (B) Main Circuit

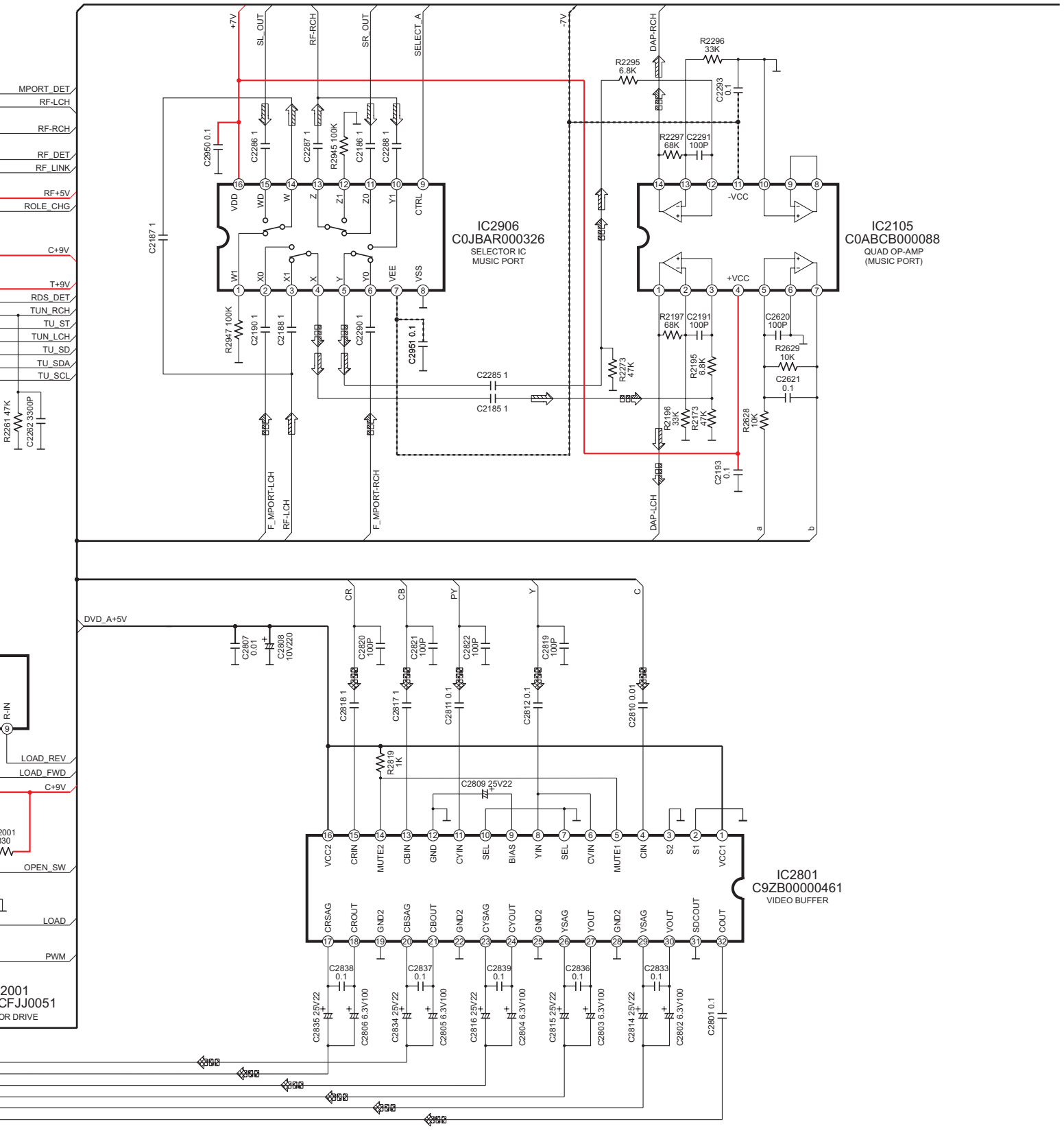
SCHEMATIC DIAGRAM-5

B MAIN CIRCUIT

:MAIN SIGNAL LINE :MUSIC PORT SIGNAL LINE :FM/AM SIGNAL LINE :DVD(VIDEO) SIGNAL LINE :AUX SIGNAL LI



:AUX SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE



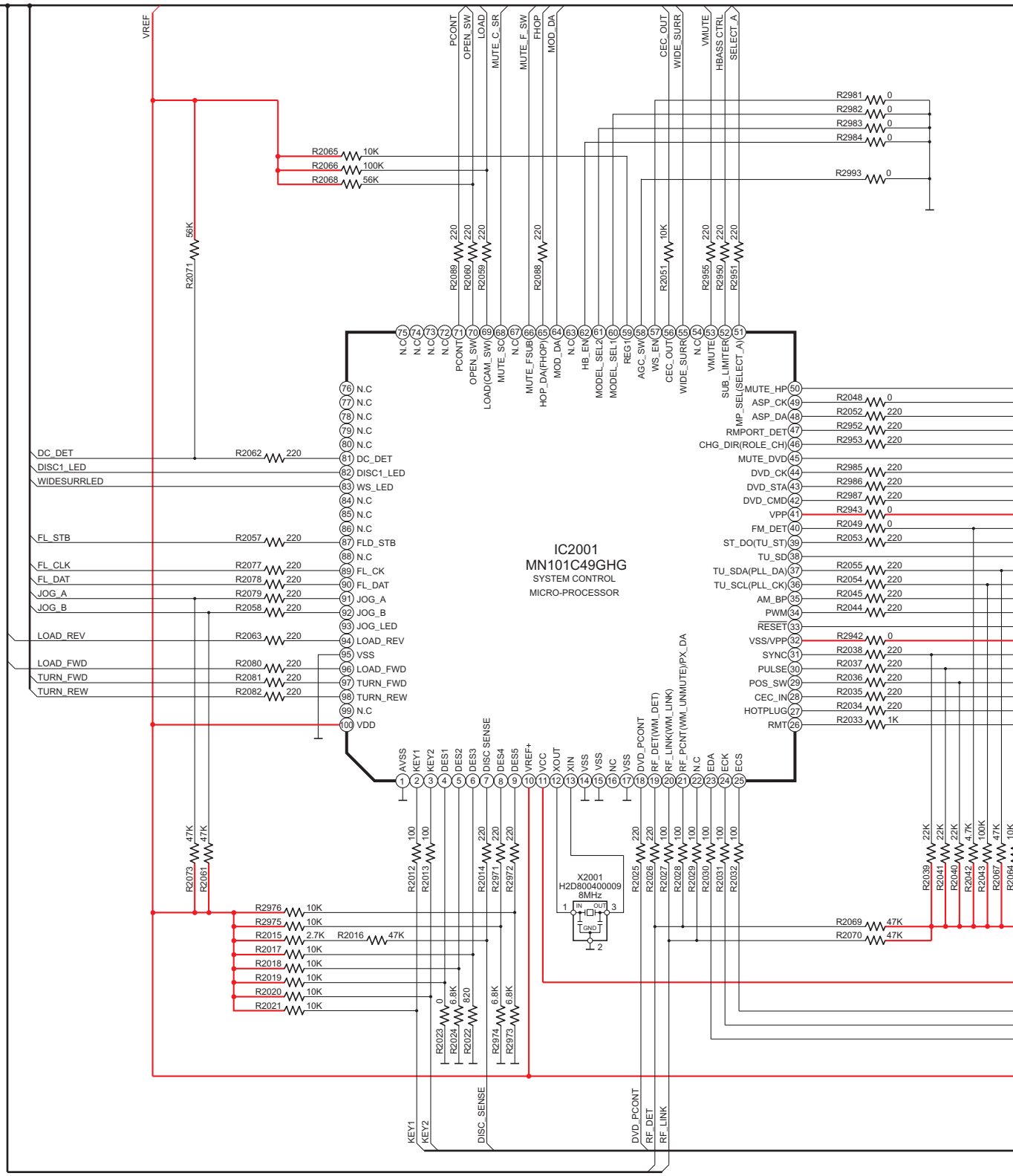
SA-HT440P/PC MAIN CIRCUIT

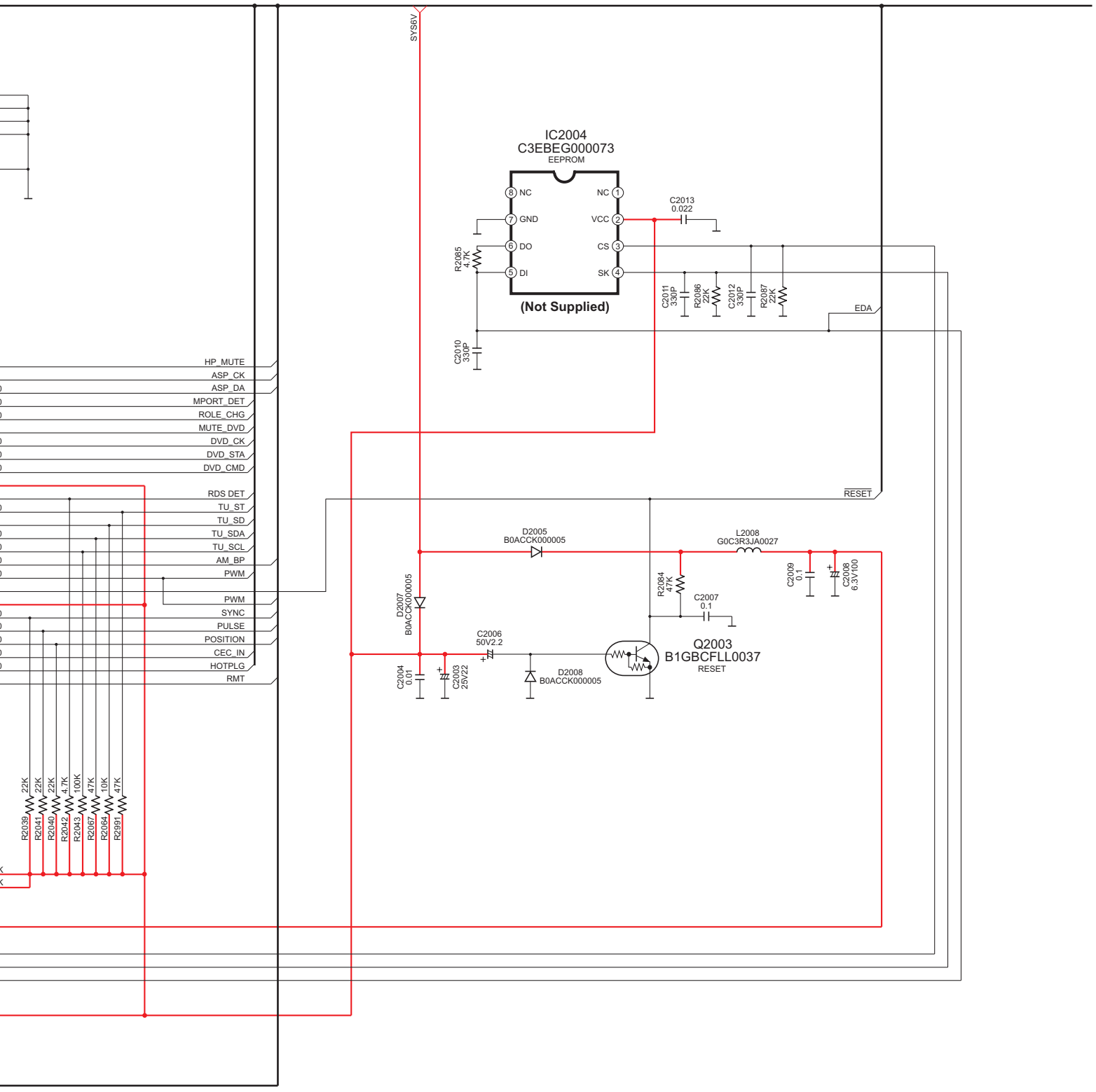
7	8	9	10	11	12	13

SCHEMATIC DIAGRAM-6

B MAIN CIRCUIT

—— :+B SIGNAL LINE

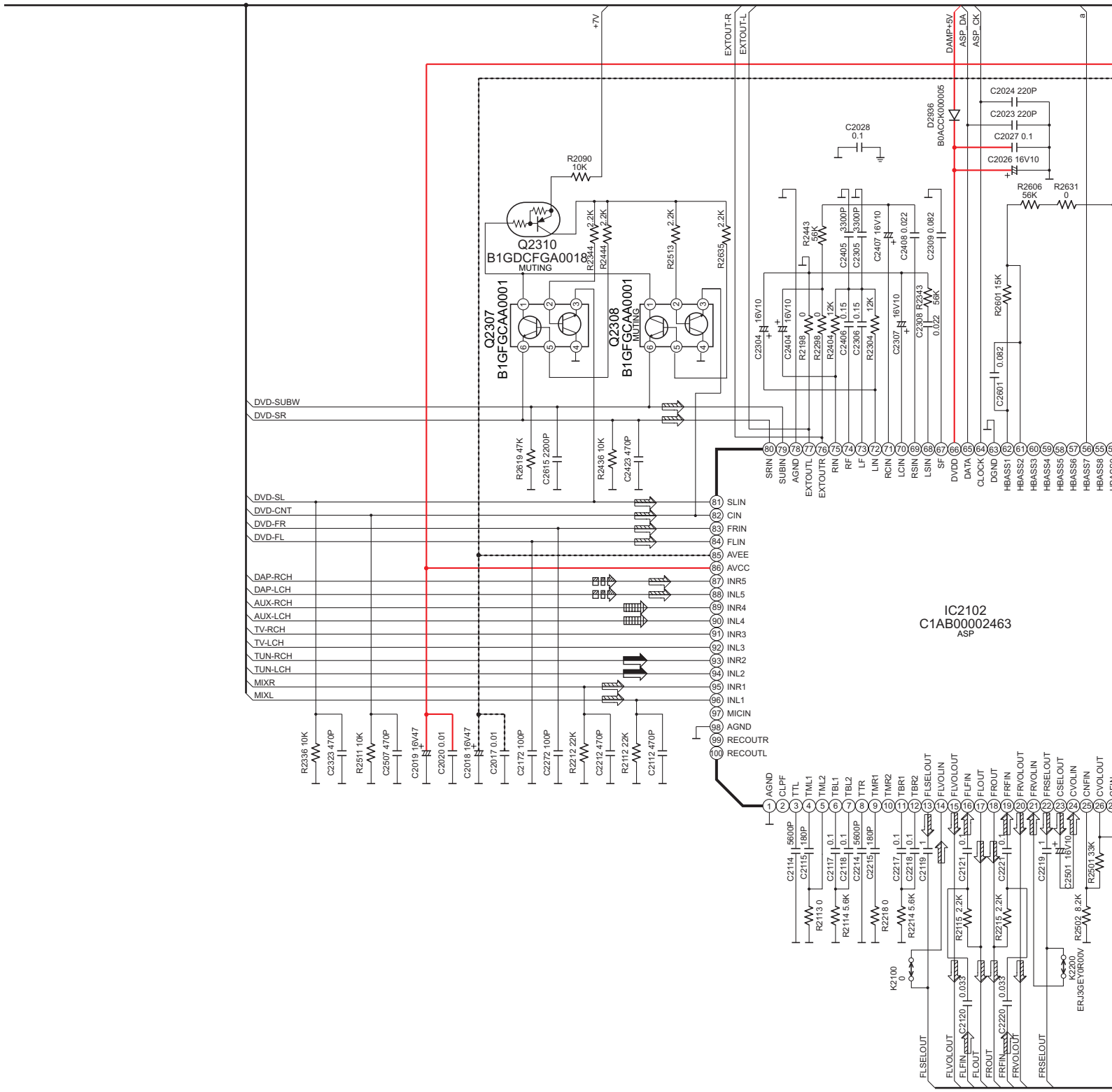



SYS6V
IC2004
C3EBEG000073
EEPROM
8 NC
7 GND
6 DO
5 DI
NC 1
VCC 2
CS 3
SK 4
(Not Supplied)
C2013
0.022
R2085
4.7K
C2011
330P
R2086
22K
C2012
330P
R2087
22K
C2010
330P
EDA
HP_MUTE
ASP_CK
ASP_DA
MPORT_DET
ROLE_CHG
MUTE_DVD
DVD_CK
DVD_STA
DVD_CMD
RDS DET
TU_ST
TU_SD
TU_SDA
TU_SCL
AM_BP
PWM
PWM
SYNC
PULSE
POSITION
CEC_IN
HOTPLG
RMT
RESET
D2005
B0ACCK000005
L2008
G0C3R3JA0027
C2009
0.1
C2008
6.3V100
R2084
47K
C2007
0.1
D2007
B0ACCK000005
C2006
50V2.2
Q2003
B1GBCFLL0037
RESET
C2004
0.01
C2003
25V22
D2008
B0ACCK000005
R2039
22K
R2041
22K
R2040
22K
R2042
4.7K
R2043
100K
R2067
47K
R2064
10K
R2991
47K

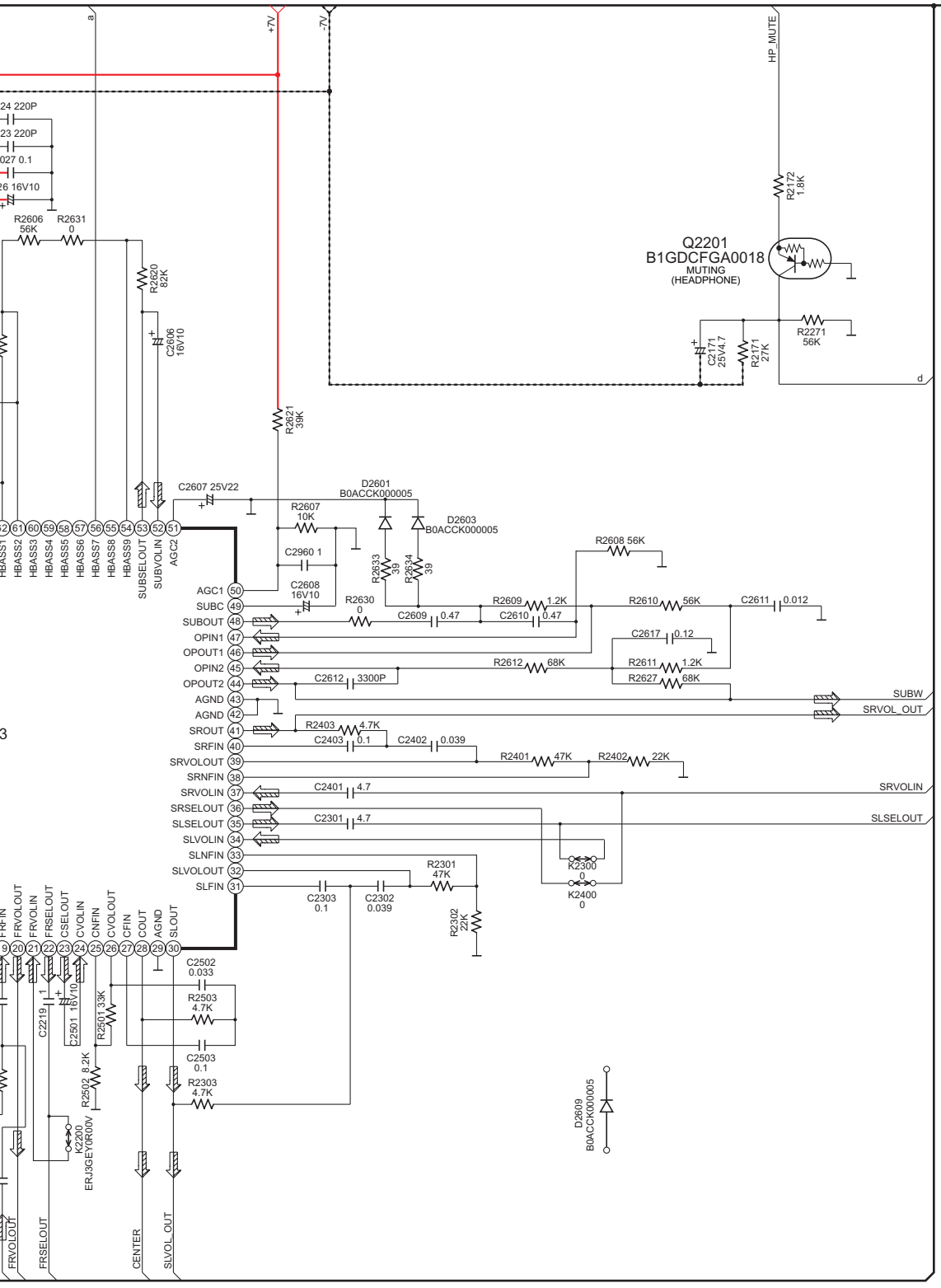
SCHEMATIC DIAGRAM-7

B MAIN CIRCUIT

: AUX SIGNAL LINE : MUSIC PORT SIGNAL LINE : MAIN SIGNAL LINE : FM/AM SIGNAL LINE :+B SIGNAL LINE



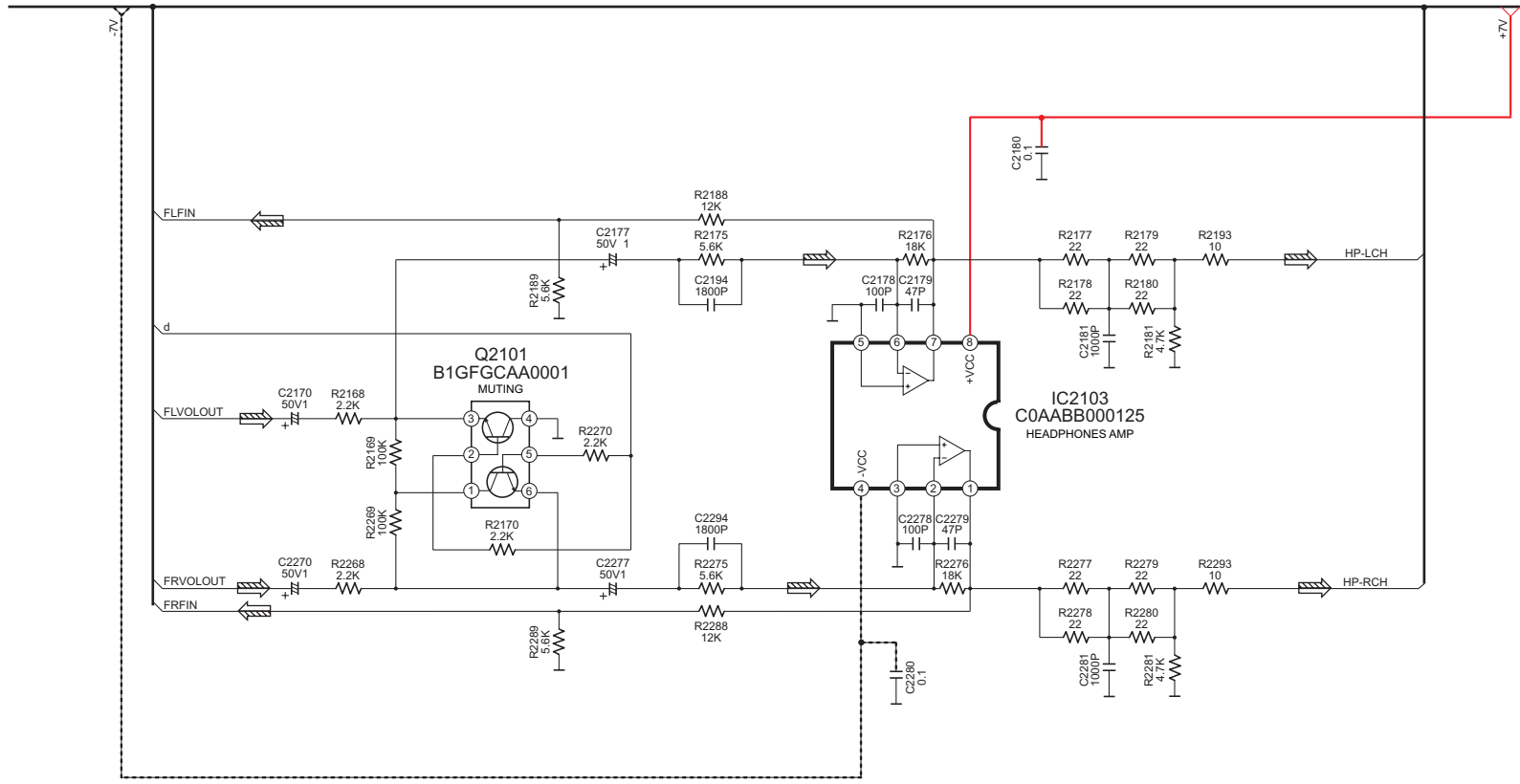
3 SIGNAL LINE ----- :-B SIGNAL LINE



SCHEMATIC DIAGRAM-8

B MAIN CIRCUIT

:MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE

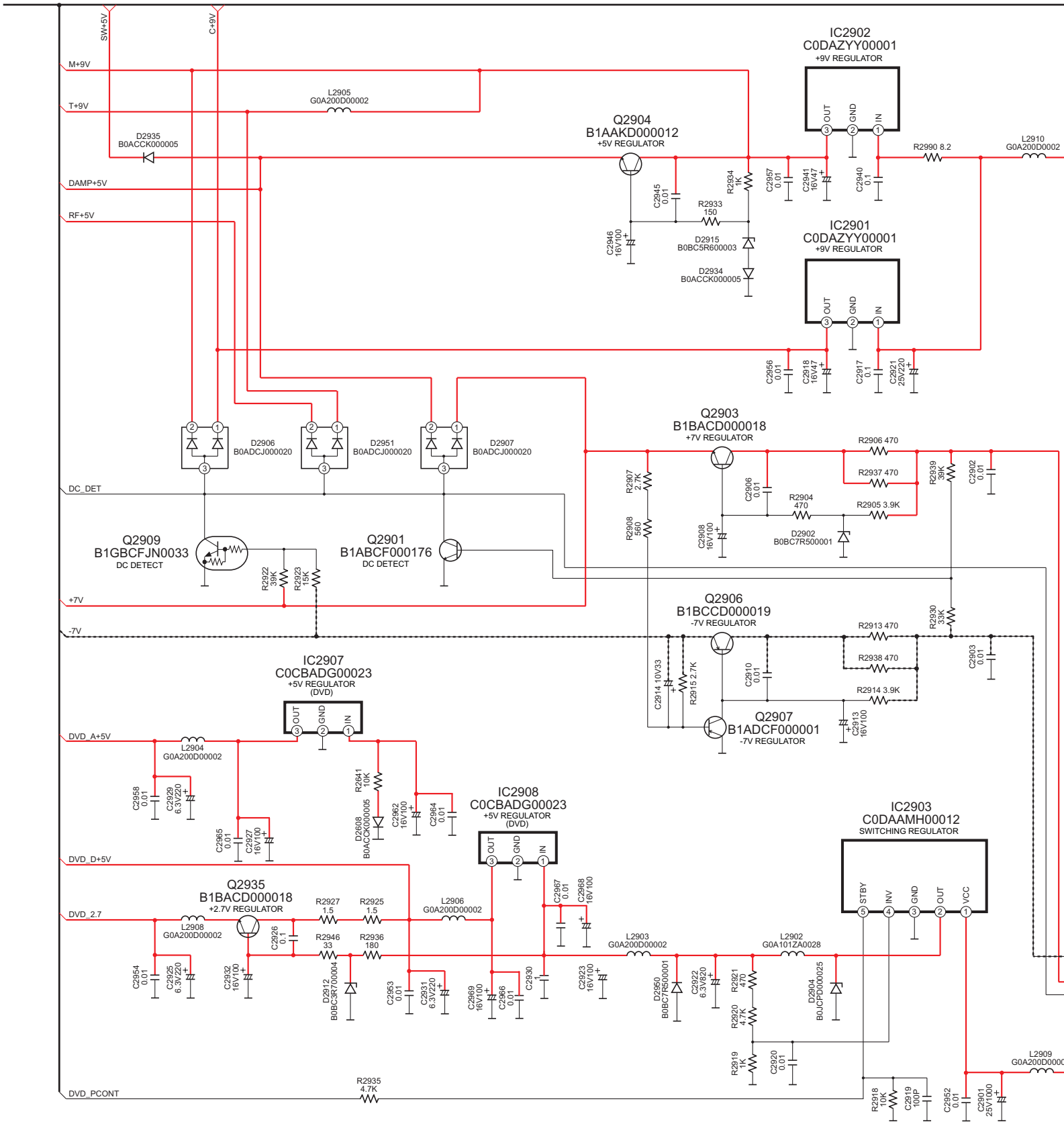


+7V
CH
CH

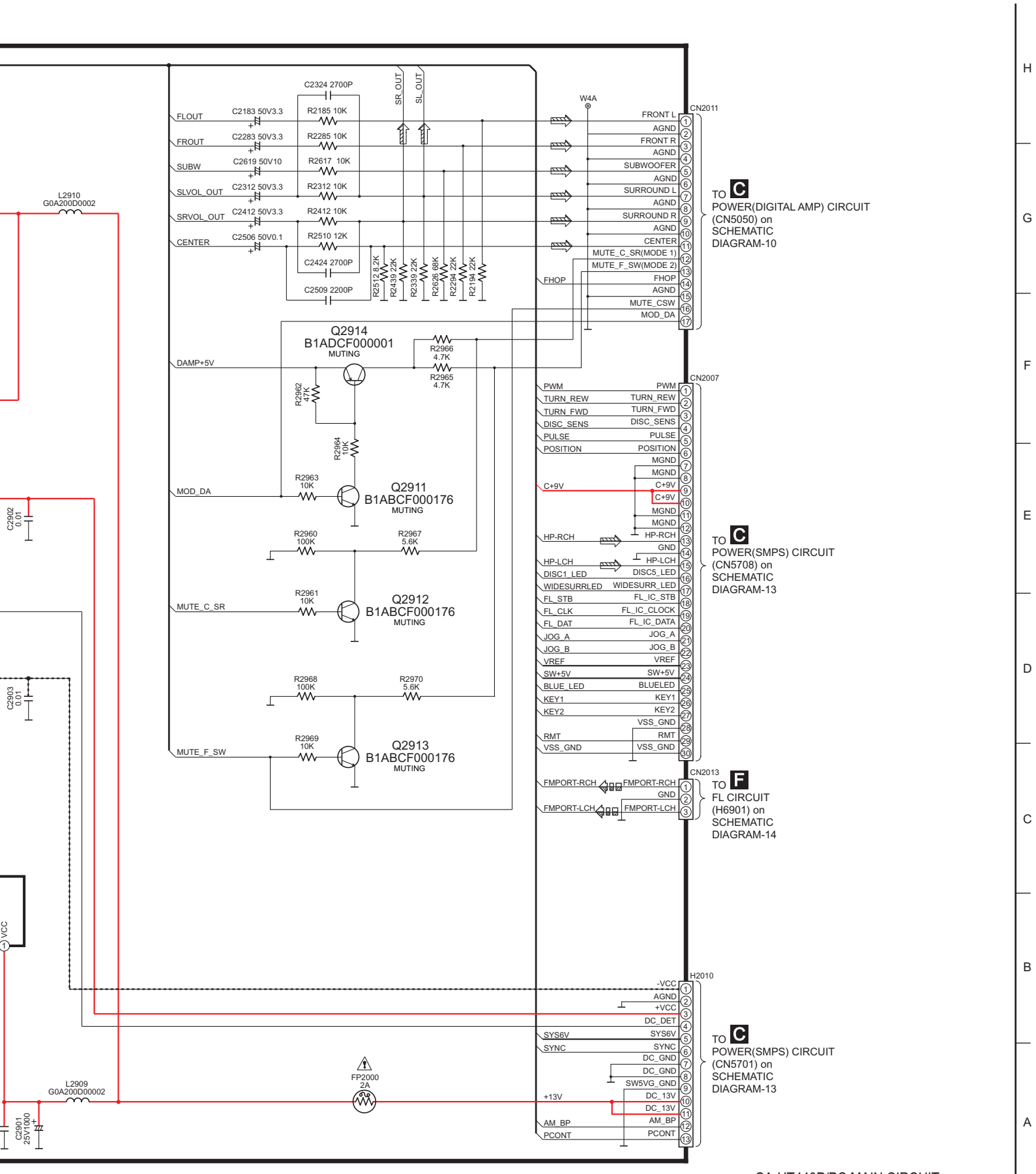
SCHEMATIC DIAGRAM-9

B MAIN CIRCUIT

:MAIN SIGNAL LINE : MUSIC PORT SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE



53	54	55	56	57	58	59



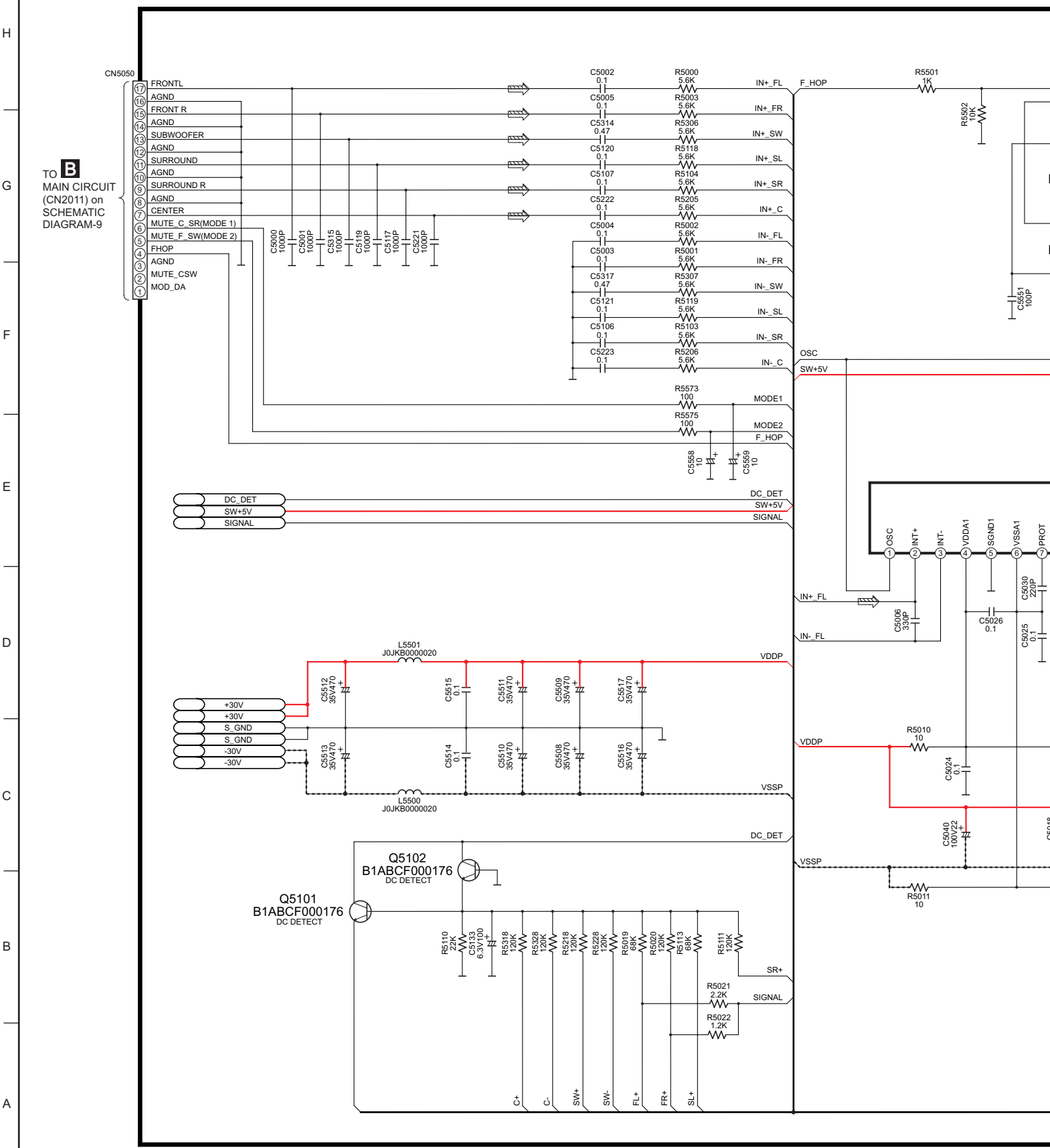
SA-HT440P/PC MAIN CIRCUIT

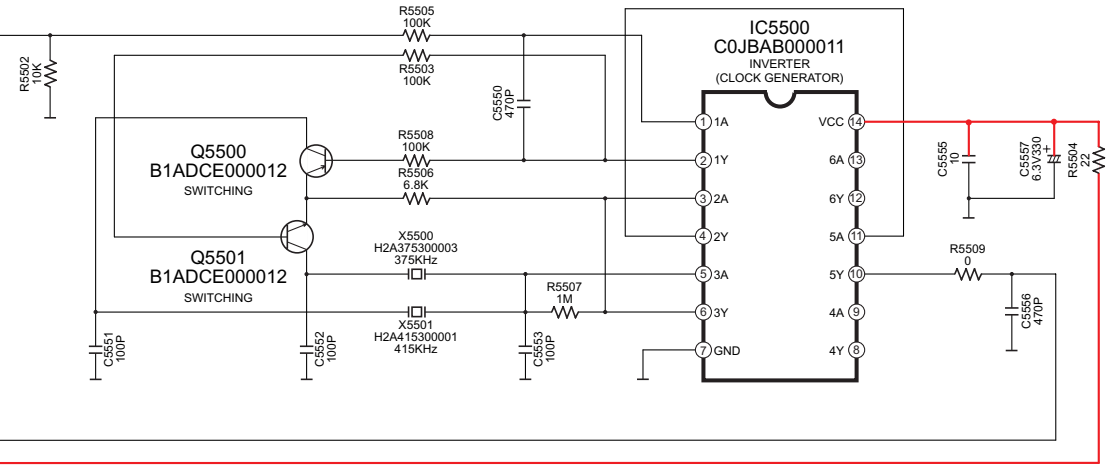
18.3. (C) Power Circuit

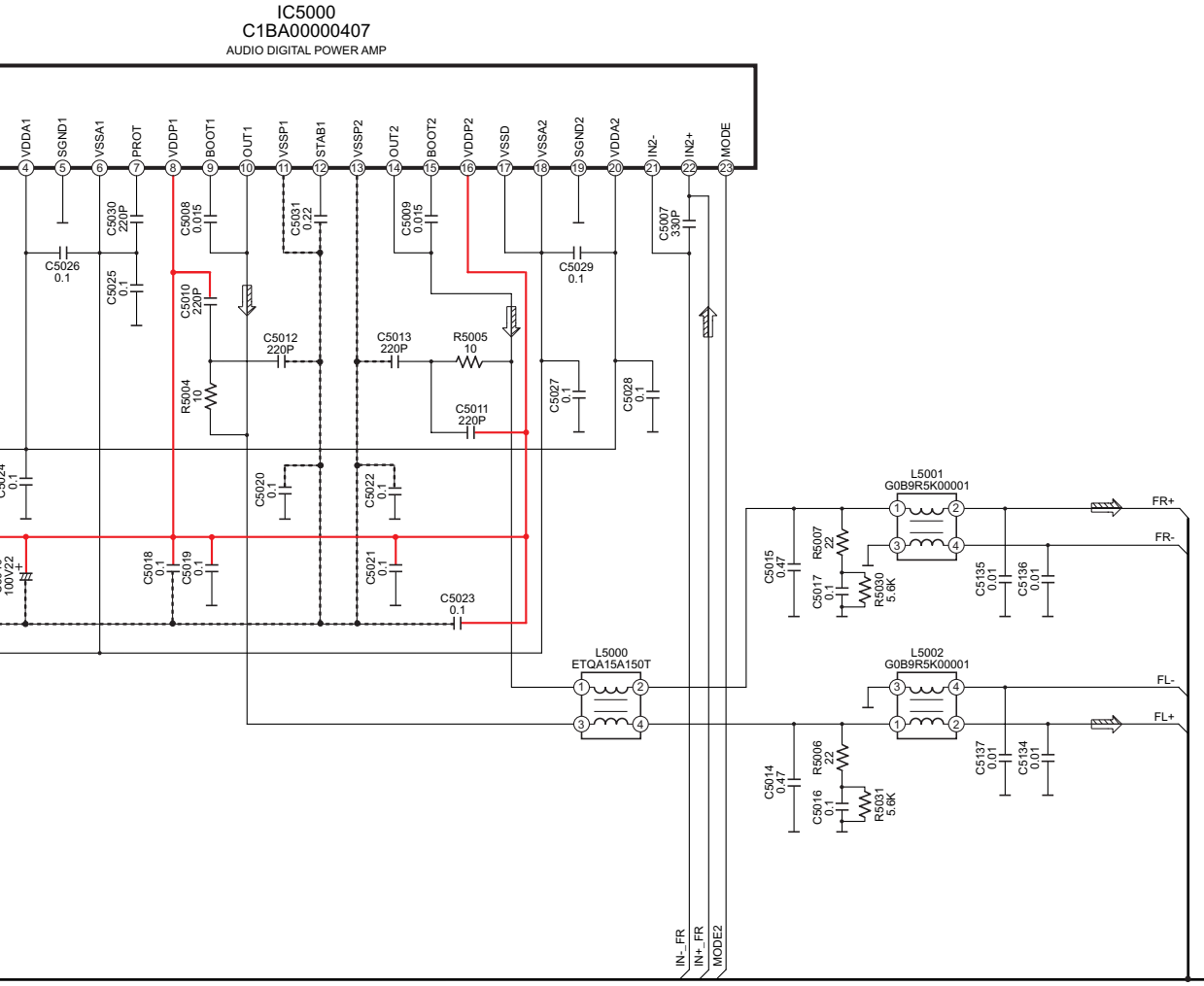
SCHEMATIC DIAGRAM-10

C POWER(DIGITAL AMP) CIRCUIT

:MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE







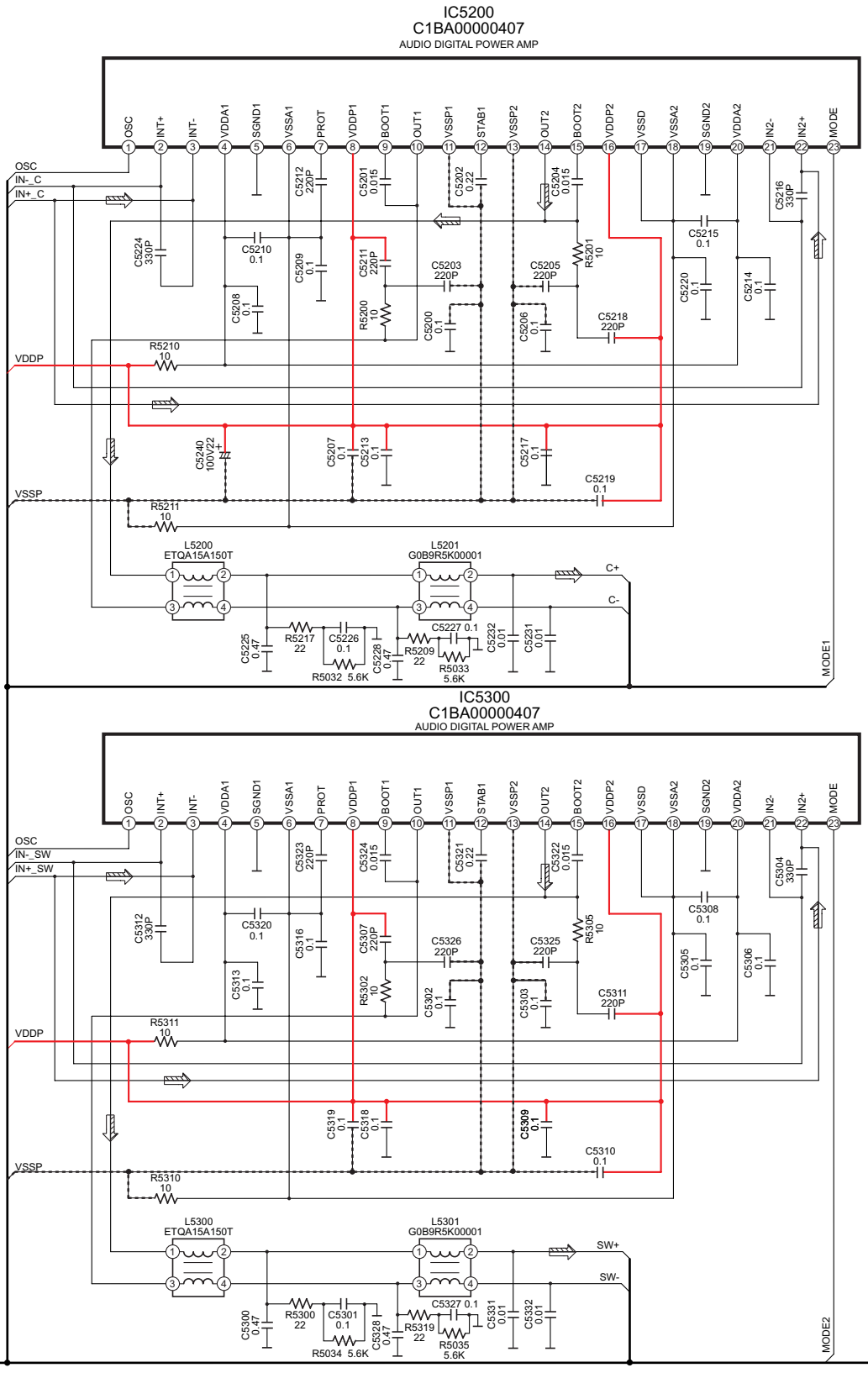
SA-HT440P/PC POWER(DIGITAL AMP) CIRCUIT

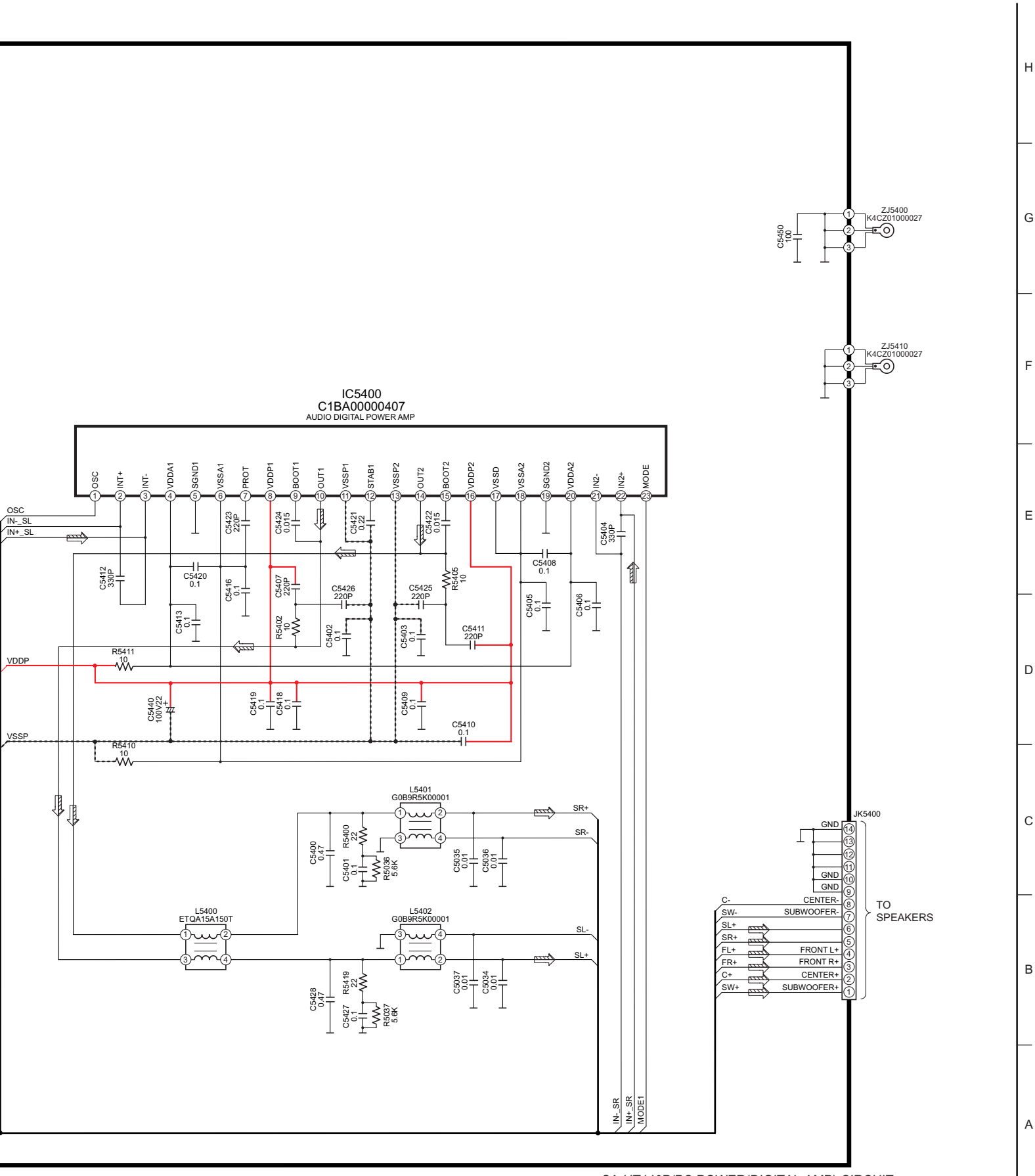
7 | 8 | 9 | 10 | 11 | 12 | 13

SCHEMATIC DIAGRAM-11

C POWER(DIGITAL AMP) CIRCUIT

:MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE



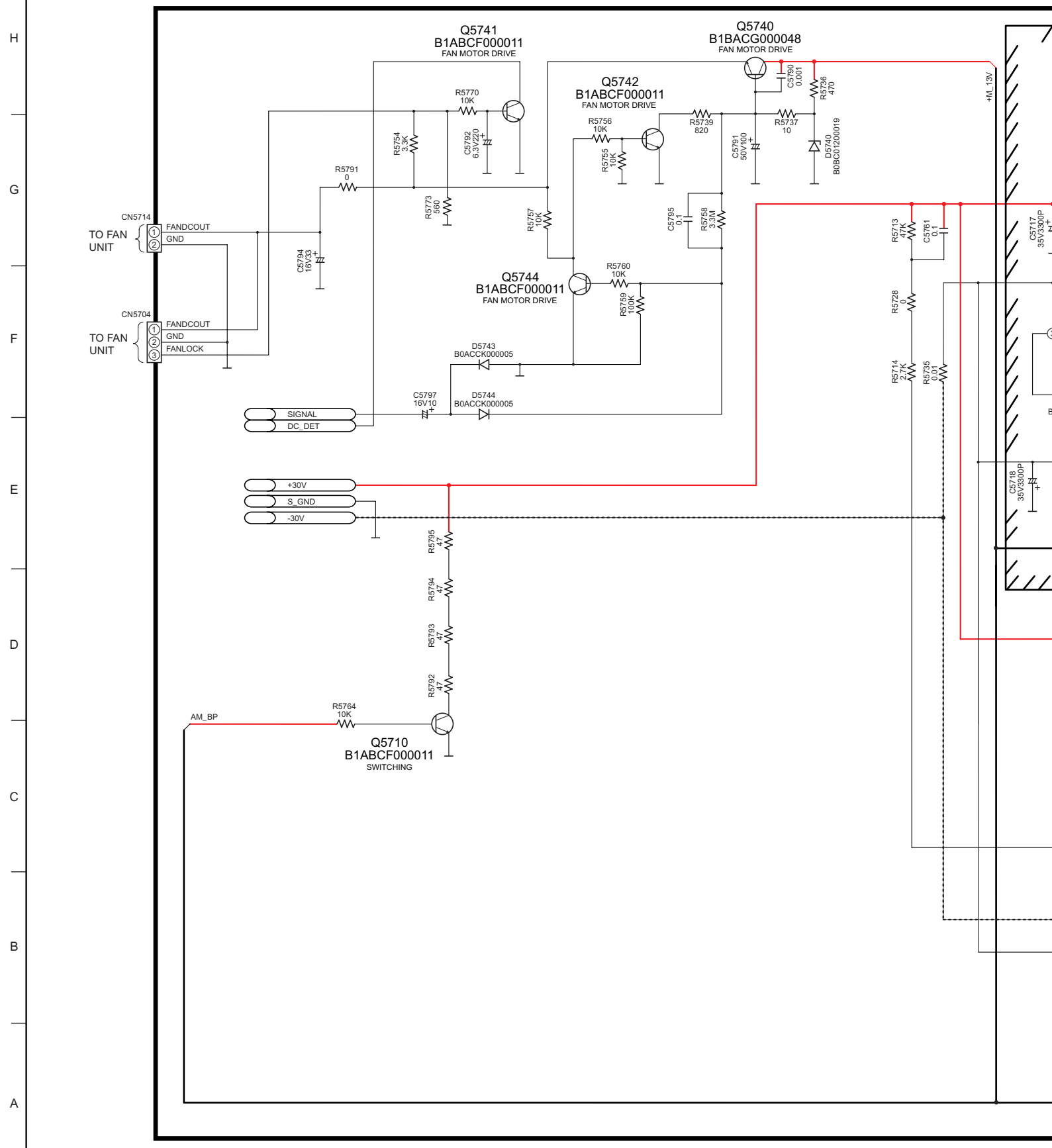


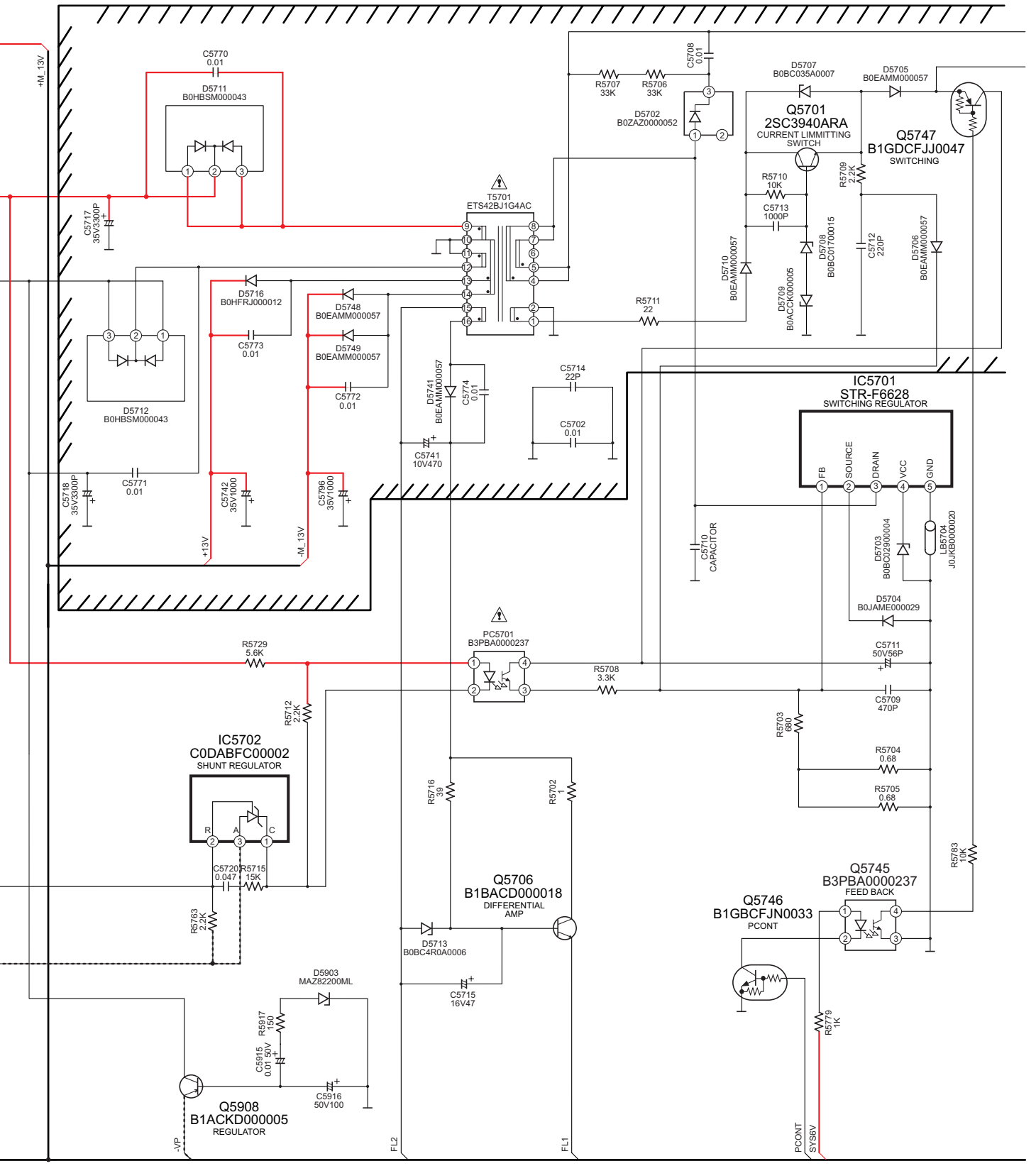
SA-HT440P/PC POWER(DIGITAL AMP) CIRCUIT

SCHEMATIC DIAGRAM-12

C POWER(SMPS) CIRCUIT

:+B SIGNAL LINE :-B SIGNAL LINE

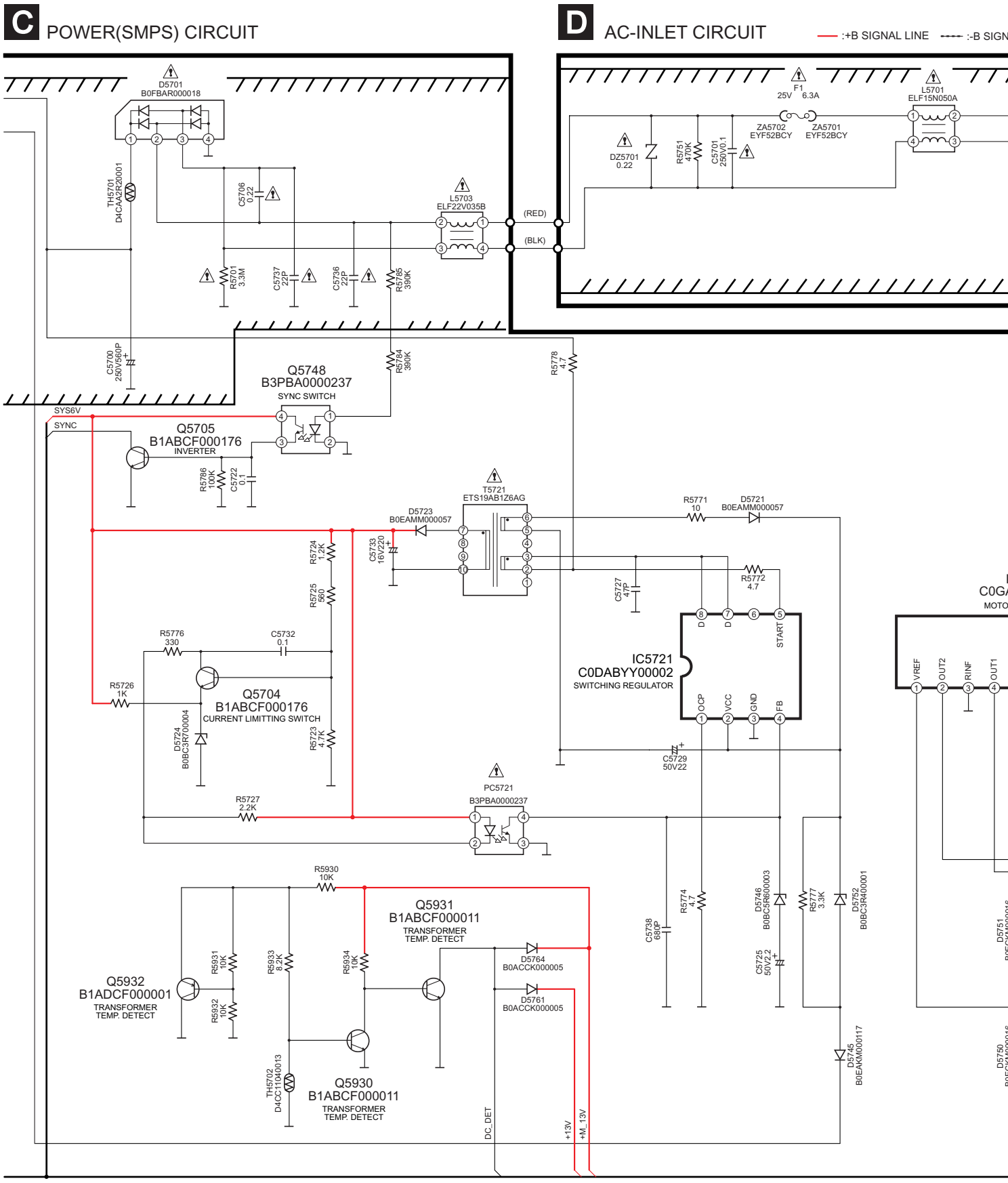




SA-HT440P/PC POWER(SMPS) CIRCUIT

7	8	9	10	11	12	13

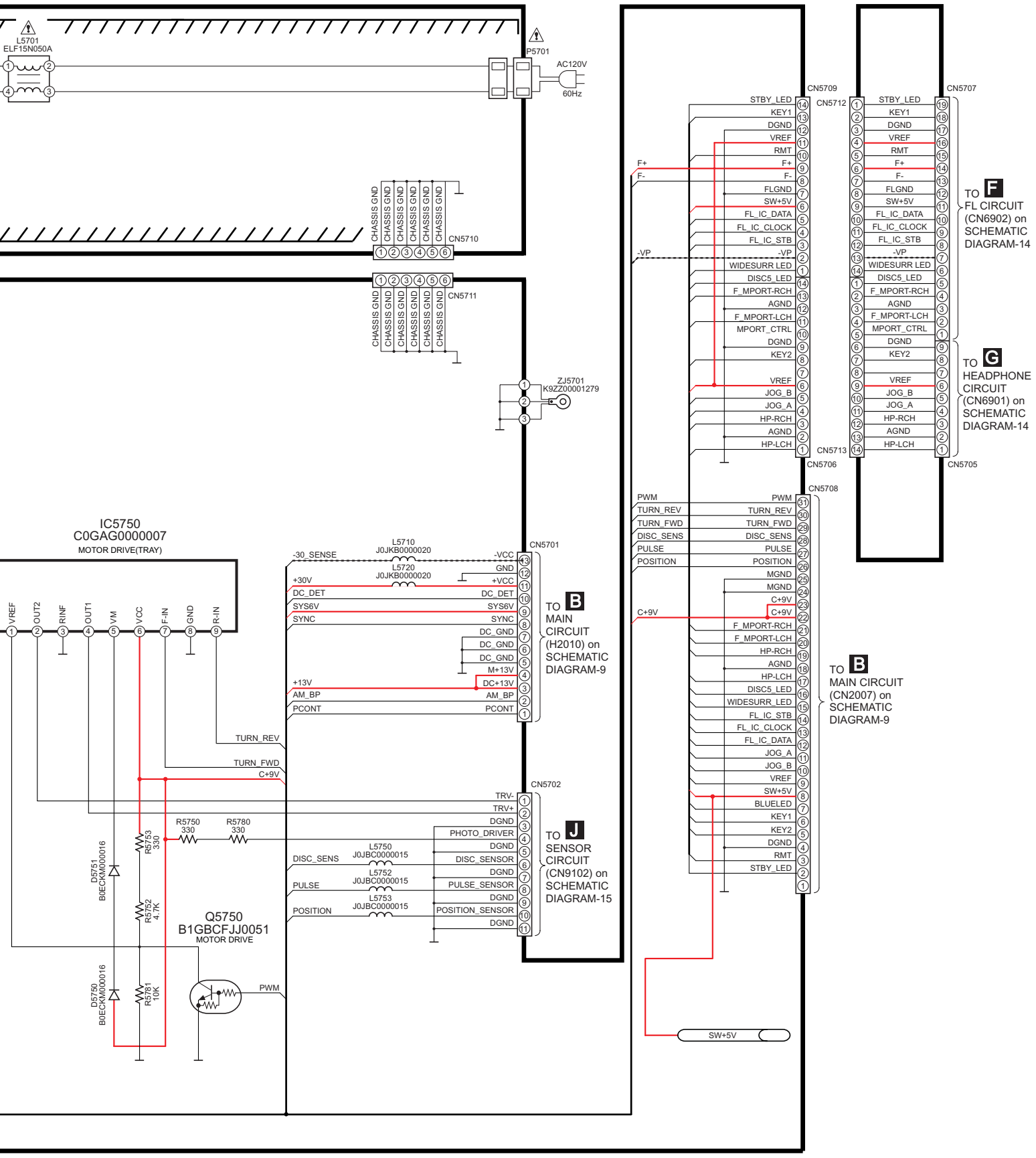
SCHEMATIC DIAGRAM-13



14	15	16	17	18	19	20

LINE :-B SIGNAL LINE

E SUB POWER CIRCUIT



SA-HT440P/PC POWER(SMPS) CIRCUIT

H G F E D C B A

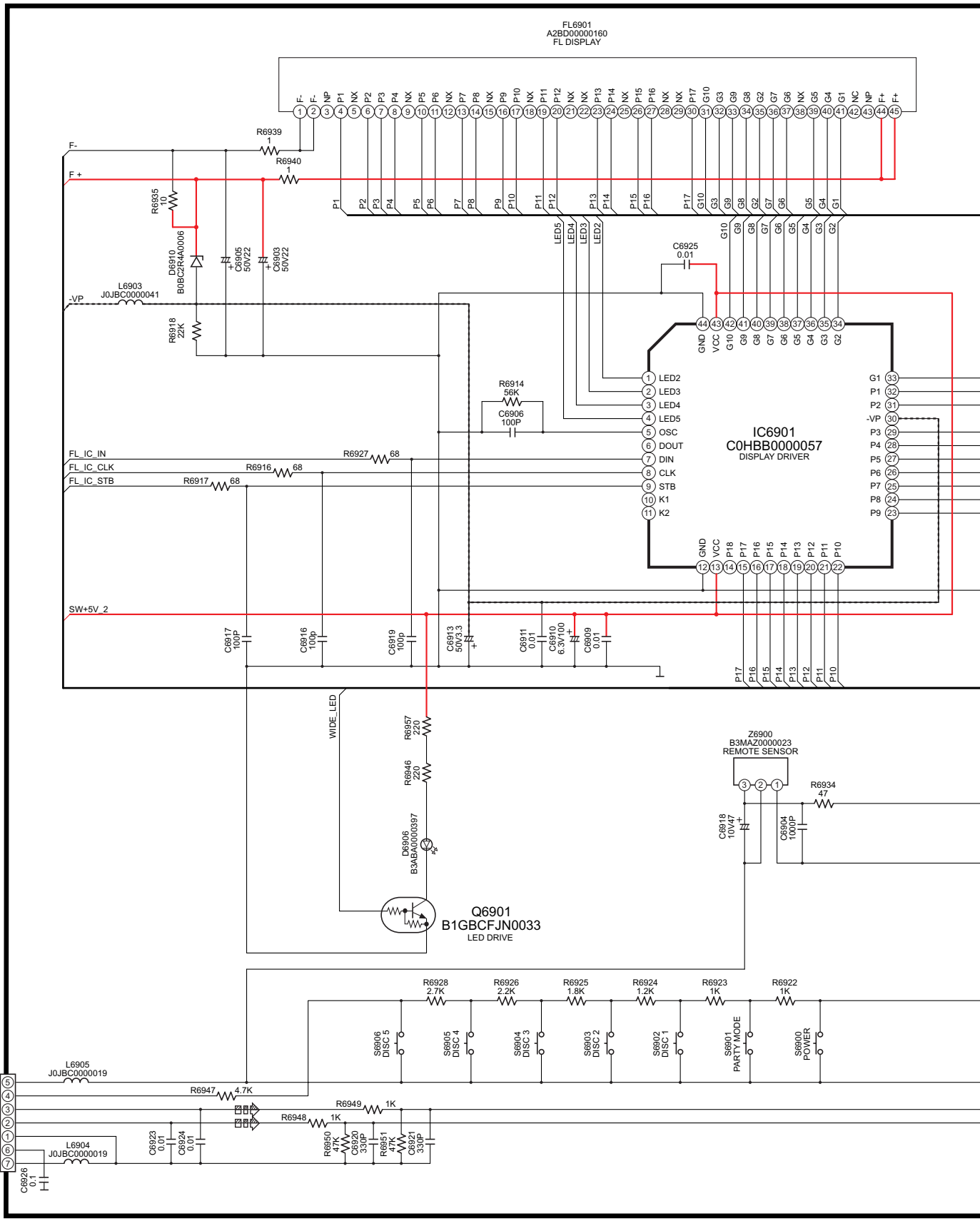
20 21 22 23 24 25 26

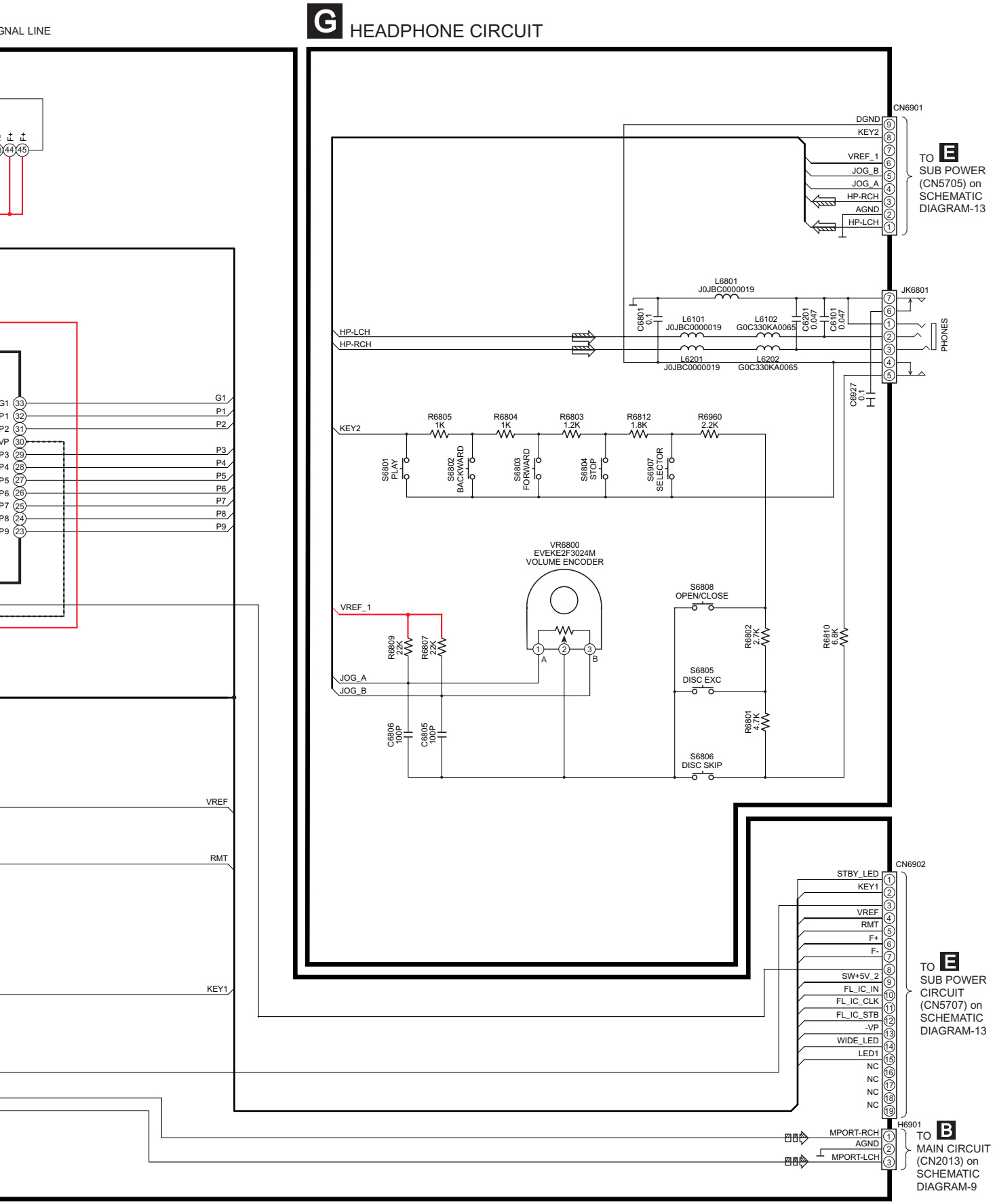
18.4. (D) Panel Circuit

SCHEMATIC DIAGRAM-14

F FL CIRCUIT

: MUSIC PORT SIGNAL LINE : MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE





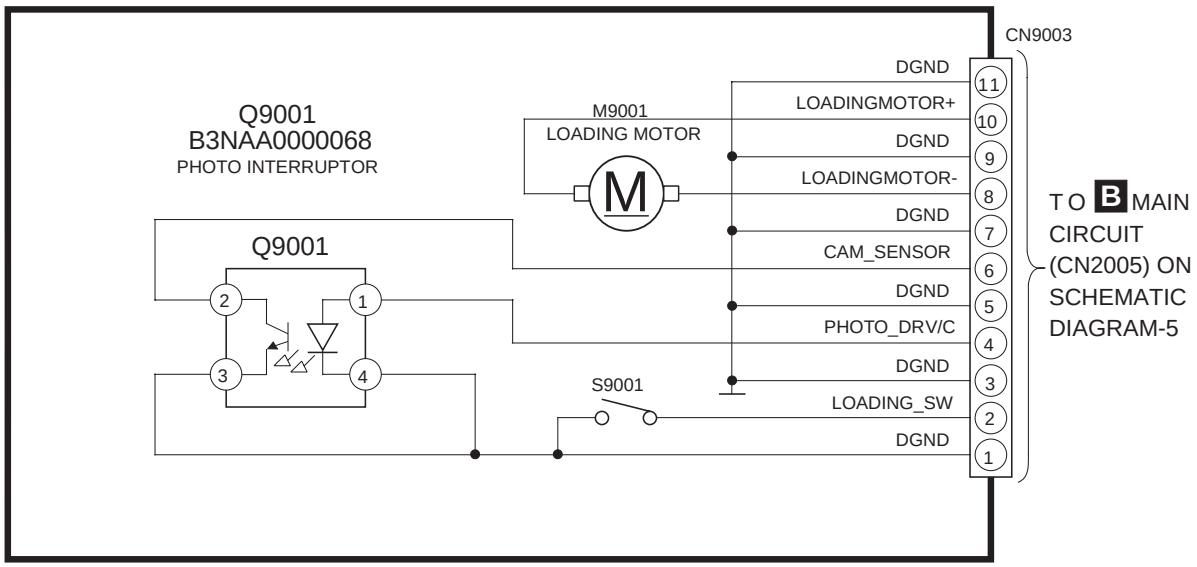
SA-HT440P/PC FL/HEADPHONE CIRCUIT

7 | 8 | 9 | 10 | 11 | 12 | 13

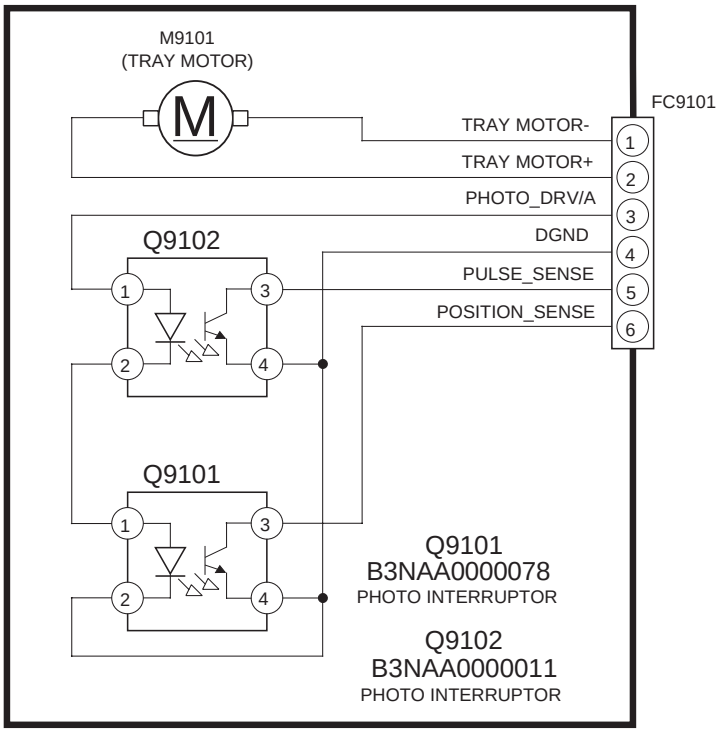
18.5. (E) Loading motor, Tray motor, Sensor Circuit

SCHEMATIC DIAGRAM-15

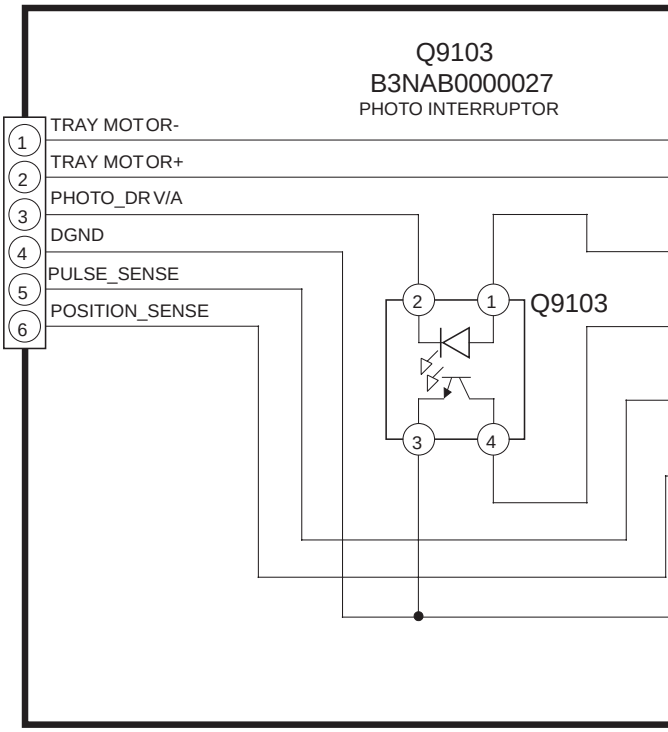
H LOADING MOTOR CIRCUIT

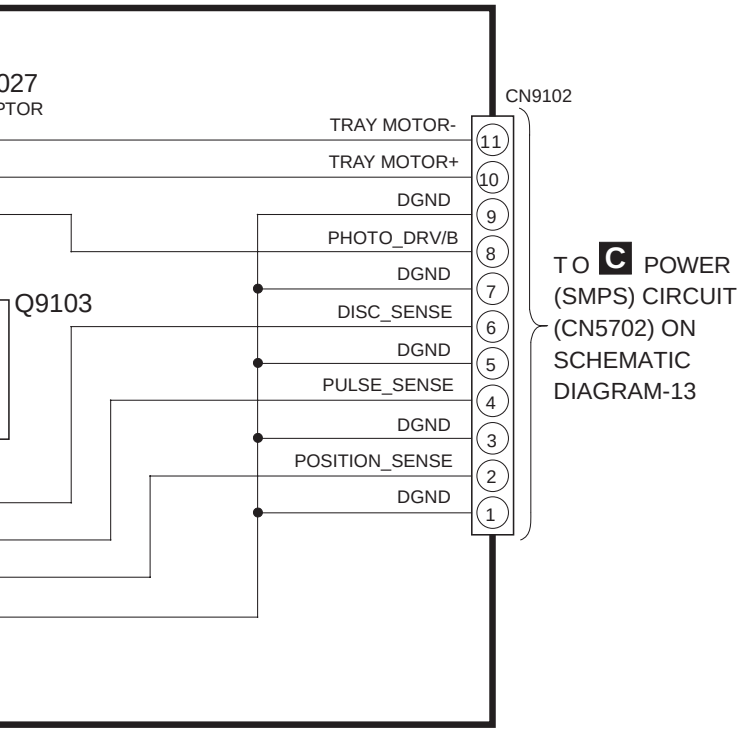


I TRAY MOTOR CIRCUIT



J SENSOR CIRCUIT

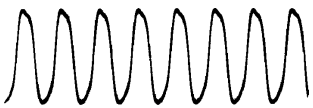




SA-HT440P/PC LOADING MOTOR/TRAY MOTOR/SENSOR CIRCUIT

7 | 8 | 9 | 10 | 11 | 12 | 13

WF No. IC2001-12 (PLAY)



5.6Vp-p(100nsec/div)

WF No. IC2102-15 (PLAY)

2.5Vp-p(200usec/div)

WF No. IC2102-17 (PLAY)

3.5Vp-p(200usec/div)

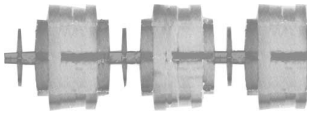
WF No. IC2102-30 (PLAY)

12Vp-p(5msec/div)

WF No. IC2103-1 (PLAY)

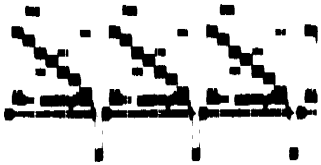
3.4Vp-p(200usec/div)

WF No. IC2801-4 (PLAY)



0.6Vp-p(20usec/div)

WF No. IC2801-8 (PLAY)



1.2Vp-p(20usec/div)

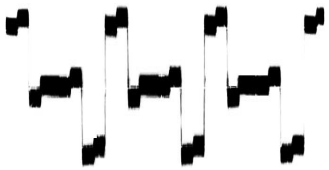
WF No. IC2801-11 (PLAY)

1.2Vp-p(20usec/div)

WF No. IC2801-13 (PLAY)

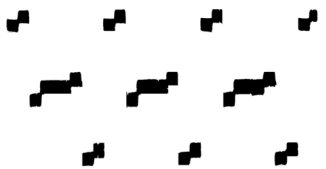
0.6Vp-p(20usec/div)

WF No. IC2801-15 (PLAY)



1.6Vp-p(20usec/div)

WF No. IC2801-18 (PLAY)

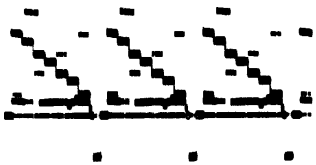


1.0Vp-p(20usec/div)

WF No. IC2801-21 (PLAY)

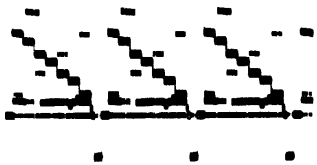
1.0Vp-p(20usec/div)

WF No. IC2801-24 (PLAY)



2.1Vp-p(20usec/div)

WF No. IC2801-27 (PLAY)



1.6Vp-p(20usec/div)

WF No. IC2801-30 (PLAY)

2.1Vp-p(20usec/div)

WF No. IC2801-32 (PLAY)

1.3-Vp-p(20usec/div)

WF No. IC5000-10 (PLAY)

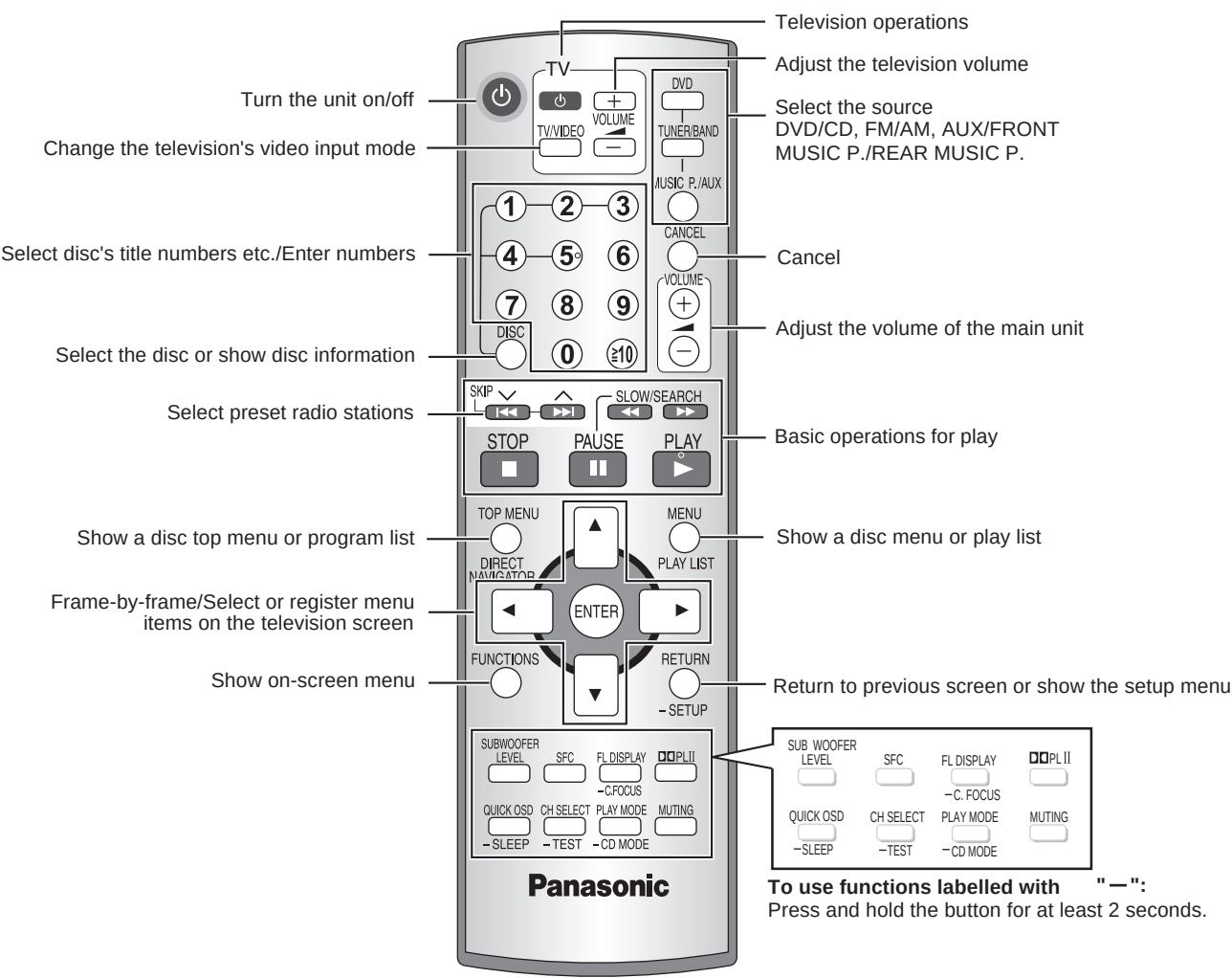
90-Vp-p(500nsec/div)

WF No. IC5200-14 (PLAY)

90-Vp-p(500nsec/div)

WF No. IC5300-14 (PLAY)

94-Vp-p(500nsec/div)


Television operations
Adjust the television volume
Turn the unit on/off
Select the source
DVD/CD, FM/AM, AUX/FRONT
MUSIC P./REAR MUSIC P.
Change the television's video input mode
Select disc's title numbers etc./Enter numbers
Cancel
Adjust the volume of the main unit
Select the disc or show disc information
Select preset radio stations
Basic operations for play
Show a disc top menu or program list
Show a disc menu or play list
Frame-by-frame/Select or register menu items on the television screen
Show on-screen menu
Return to previous screen or show the setup menu
TV
VOLUME
TV/VIDEO
DVD
TUNER/BAND
MUSIC P./AUX
CANCEL
DISC
SKIP
SLOW/SEARCH
STOP
PAUSE
PLAY
TOP MENU
MENU
DIRECT NAVIGATOR
PLAY LIST
ENTER
FUNCTIONS
RETURN
SETUP
SUBWOOFER LEVEL
SFC
FL DISPLAY
C.FOCUS
PLII
QUICK OSD
SLEEP
CH SELECT
TEST
PLAY MODE
CD MODE
MUTING
Panasonic
SUB WOOFER LEVEL
FL DISPLAY
C. FOCUS
QUICK OSD
CH SELECT
PLAY MODE
MUTING
SLEEP
TEST
CD MODE
To use functions labelled with "—":
Press and hold the button for at least 2 seconds.

Standby/on switch [POWER ⏻/I]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

⏏OPEN/CLOSE
Open/Close the disc drawer

⏮/◀◀ , ▶▶/⏭/∨ TUNING ∧
Skip or slow-search play/
Select the radio stations

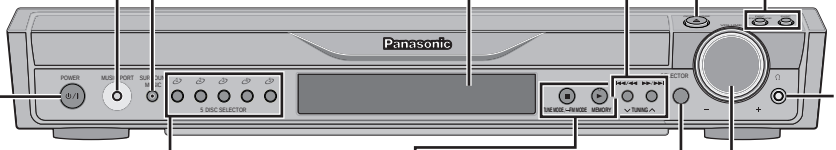
MUSIC PORT
Connect an external device

SURROUND MUSIC
Equalizing the sound

Display

DISC EXCHANGE
Open the disc drawer to exchange the disc in the play position

DISC SKIP
Skip to the next disc tray



Phones
Connect headphones

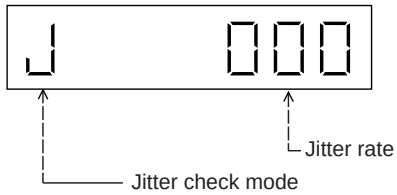
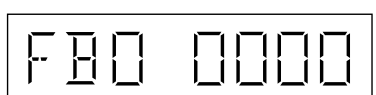
5 DISC SELECTOR
Select the disc tray

■/-TUNE MODE /—FM MODE
Stop playing/Select the tuning mode
Adjust the FM reception condition

VOLUME
Turn up/down the volume

►/MEMORY
Play discs/Memorize the receiving radio stations

SELECTOR
DVD/CD→FM→AM→AUX→FRONT MUSIC P.→REAR MUSIC P.→ Return to DVD/CD

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Jitter check	Jitter check Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	 Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	In STOP (no disc) mode, press STOP button on the player, and "5" button on the remote control unit. Press STOP or OPEN button to exit. Press "FL Display" button on remote control unit for next page (FL Display).
Error code check	Error code check The latest error code stored in the EEPROM IC is displayed.	 Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: DVDnn UXX Error code = 0 x DBXX is expressed: → DVDnn HXX Error code = 0 x DXXX is expressed: → DVDnn FXXX Error code = 0 x 0000 is expressed: → DVDnn F--- * "xx" denotes the error code →	In STOP (no disc) mode, press STOP button on the player, and "0" button on the remote control unit. * With pointing of cursor up and down on display. Cancelled automatically 5 seconds later. To exit, press [POWER] button on main unit or remote control.
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for each of DVD laser and CD laser is separately saved in the EEPROM IC.	 The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is switched on.	In STOP (no disc) mode, press STOP button on the player, and PAUSE button on the remote control unit. Cancelled automatically 5 seconds later. Press "FL Display" button on remote control unit for next page (FL Display) on values of laser drive current.
DVD laser drive current measurement	DVD laser drive current measurement ·DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	 The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	In STOP (no disc) mode, press STOP button on the player, and FUNCTIONS button on the remote control unit. Cancelled automatically 5 seconds later. Press "FL Display" button on remote control unit for next page (FL Display) on values of dvd drive current.
ADSC internal RAM data check	ADSC internal RAM data check ·ADSC internal RAM data is read out and displayed.	 The value is shown in hexadecimal notation. The above example shows the data in ADSC address OFAh is 6901h.	In STOP (no disc) mode, press STOP button on the player, and "1" button on the remote control unit. Press STOP or PLAY button.
CD laser drive current measurement	CD laser drive current measurement CD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when POWER button on the player is switched off.)	 The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	In STOP (no disc) mode, press STOP button on the player, and "3" button on the remote control unit. Cancelled automatically 5 seconds later. Press "FL Display" button on remote control unit for next page. (FL Display)

Problems	Checking Points	Checking components
1) Firmware downloading fails	a) Check supply voltages on ICs pins	IC8111, IC8651, IC8001, IC8051, IC8151
	b) Check Oscillation frequency and level	X8621 , C8621 , C8622 , R8621 , R8622
2) CPPM/CPRM key download fails	c) Check reset signal and power voltage rise time	IC8601
	d) Check Flash ROM address and data bus	IC8651
	e) Check SDRAM addresand data bus, CLK and other control signals waveform	IC8051
	f) Check EEPROM CLK & data line	IC8611
	***Compare the above with OK condition Module**	***Check for solder short and/or component missing/damaged**

Problems	Checking Points	Checking components
1) No DVD logo screen saver	a) Check supply voltages (3.3V and 1.2V) b) Check video signals especially Luminance,Y signal c) Check SDRAM, EEPROM and Flash ROM for solder short.	IC8111, IC8151 LB8301, R8321, R8322 IC8051, IC8611, IC8651
2) Picture black and white only	a) Check C (chroma) signal if using Composite or S-Video b) Check Pb & Pr signal if using Component	LB8302 LB8304 , LB8305
3) Distorted picture or abnormal sound is heard during initialisation	a) Check SDRAM addresand data bus, CLK and other control signals waveform b) Check video signals c) Check audio DAC circuitry ***Compare the above with OK condition Module**	IC8051 LB8301, R8321, R8322, LB8302, R8325, R8326 IC8421 ***Check for solder short and/or component missing/damaged**
4) No TOC/Long TOC	a) Check motor driver circuitry (voltages) b) Check laser drive circuitry (voltages and current) c) Check LSI connection to motor drive circuitry ***Compare the above with OK condition Module**	IC8251 Q8550, Q8551, Q8552, Q8560, Q8561, Q8562 IC8001 ***Check for solder short and/or component missing/damaged**
5) Disc not spinning 6) Traverse not moving 7) Traverse and spindle abnormal movement	a) Check connection from Backend Module to Traverse unit b) Check motor driver circuitry on voltages and control signals ***Compare the above with OK condition Module**	FP8251, FP8531, IC8251 M+9V = FP8101 (PIN 5/ 7), IC8251 (PIN 21) ***Check for solder short and/or component damaged**
8) Cannot read disc but spindle is spinning - Cannot read CD - Cannot read DVD	a) Check laser drive circuitry (voltages and current) - Check CD laser drive - Check DVD laser drive ***Check voltages and LD current and compare with OK Module**	Q8550, Q8551, Q8552, Q8560, Q8561, Q8562 Q8550, Q8560, Q8561, Q8562 Q8550, Q8551, Q8552, Q8560 ***Check for solder short and/or component missing/damaged**
9) Block noise during play	a) Check SDRAM address and data bus signal ***Compare the above with OK condition Module**	IC8051 ***Check for solder short and/or component damaged**
10) DVD Audio no audio output	a) CPPM key download NG, check test point for CPPM key download b) Check EEPROM ***Check for test point damaged or broken pattern**	 IC8611 ***Check for component damaged**
11) No audio	a) Check audio signal IC8421 (5.1ch), IC8420 (2.1ch) b) Check audio DAC control signals c) Check Zero Flag and A-Mute signal ***Compare the above with OK condition Module**	(MIXL / MIXR / FL / FR) LB8421 , LB8422 , LB8425 , LB8426 (SURL / SURR / CEN / SW) LB8427 , LB8428 , LB8429 , LB8431 (IC8421 / IC8420) Pin 5 , 6 , 7 & 8 QR8420 , LB8424 ***Check for solder short and/or component missing/damaged**

Problems	Checking Points	Checking components
1) Distorted picture or abnormal sound is heard during initialisation	a) Check SDRAM addresand data bus, CLK and other control signals waveform	IC8051
	b) Check video signals	LB8301, R8321, R8322, LB8302, R8325, R8326
	c) Check audio DAC circuitry	IC8421
	***Compare the above with OK condition Module**	***Check for solder short and/or component missing / damaged**
2) No TOC/Long TOC	a) Check motor driver circuitry (voltages)	IC8251
	b) Check laser drive circuitry (voltages and current)	Q8550, Q8551, Q8552, Q8560, Q8561, Q8562
	c) Check LSI connection to motor drive circuitry	IC8001
	***Compare the above with OK condition Module**	***Check for solder short and/or component missing / damaged**
3) Disc not spinning 4) Traverse not moving 5) Traverse and spindle abnormal movement	a) Check connection from Backend Module to Traverse unit	FP8201
	b) Check motor driver circuitry on voltages and control signals	IC8251
	***Compare the above with OK condition Module**	***Check for solder short and/or component damaged**
6) Cannot read disc but spindle is spinning	a) Check laser drive circuitry (voltages and current)	Q8550, Q8551, Q8552, Q8560, Q8561, Q8562
- Cannot read CD	- Check CD laser drive	Q8550, Q8560, Q8561, Q8562
- Cannot read DVD	- Check DVD laser drive	Q8550, Q8551, Q8552, Q8560
	***Check voltages and LD current and compare with OK Module**	***Check for solder short and/or component missing / damaged**
7) Block noise during play	a) Check SDRAM address and data bus signal	IC8051
	***Compare the above with OK condition Module**	***Check for solder short and/or component damaged**

Problems	Checking Points	Checking components
8) Jitter out of specification	a) Check LD current	
	b) Check OPU (change to other unit and confirm)	

■ Discs that can be played

DVD VIDEO DVD VIDEO	**DVD-Video** DVD-V —
DVD AUDIO	**DVD-Audio** DVD-A DVD-V ● DVD-V Some DVD-Audio Discs contain DVD-Video content.
COMPACT disc DIGITAL VIDEO COMPACT disc SUPER VIDEO	**Video CD** VCD ● Including SVCD (Conforming to IEC62107).
DVD RAM RAM4.7	**DVD-RAM** DVD-VR JPEG ● DVD-VR Recorded with devices using Version 1.1 of the Video Recording Format (a unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc. ● JPEG Recorded with Panasonic SD multi cameras or DVD video recorders using the DCF (Design rule for Camera File System) Standard Version 1.0.
DVD R R4.7 DVD RW	**DVD-R (DVD-Video) / DVD-RW (DVD-Video)** DVD-V ● Discs recorded and finalized* on DVD video recorders or DVD video cameras.
—	**+R(Video) / +RW(Video)** DVD-V ● Discs recorded and finalized* on DVD video recorders or DVD video cameras.
COMPACT disc DIGITAL AUDIO COMPACT disc DIGITAL AUDIO TEXT	**CD** CD WMA MP3 JPEG VCD ● This unit can play CD-R/RW recorded with the above formats. Close the sessions or finalize* the disc after recording. ● CD This unit is compatible with HDCD, but does not support the Peak Extend function (a function which expands the dynamic range of high-level signals). HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs. ● WMA MP3 JPEG This unit also plays HighMAT discs. ● WMA This unit does not support Multiple Bit Rate (MBR: an encoding process for audio content that produces an audio file encoded at several different bit rates).

*A process that allows play on compatible equipment.

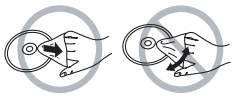
●It may not be possible to play all the above-mentioned discs in some cases due to the type of disc or condition of the recording.

■ Discs that cannot be played

DVD-RW version 1.0, DVD-ROM, CD-ROM, CDV, CD-G, SACD, DivX Video Discs and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

■ To clean discs

Wipe with a damp cloth and then wipe dry.



■ Disc handling precautions

- Do not attach labels or stickers to discs. This may cause disc warping, rendering it unusable.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, liquids which prevent static electricity, or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
  - – Discs with exposed adhesive from removed stickers or labels (rented discs, etc).
  - – Discs that are badly warped or cracked.
  - – Irregularly shaped discs, such as heart shapes.

Note about using a DualDisc

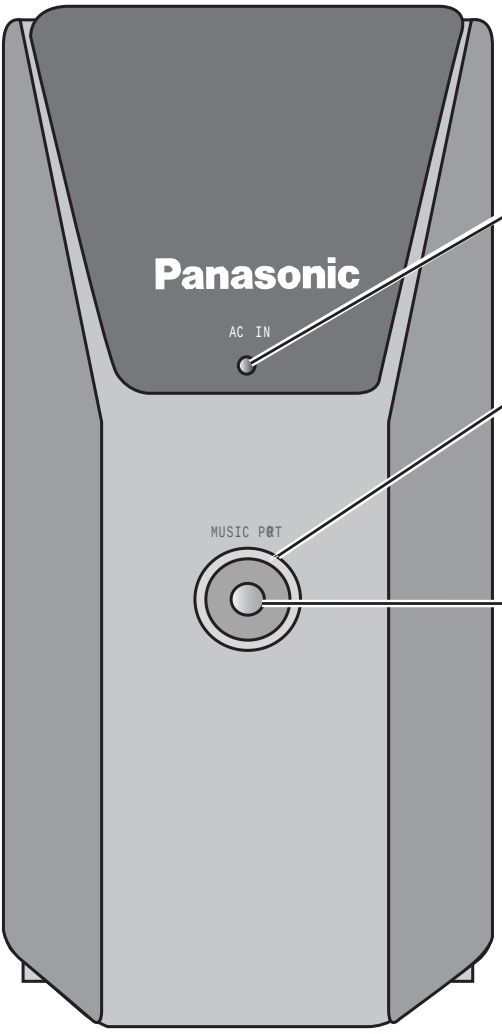
- The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so playback may not be possible.
- Do not use DualDisc in this unit as it may not possible to insert it correctly and it may get scratched or scraped.

■ Clean this unit with a soft, dry cloth.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, carefully read the instructions that came with the cloth.

Do not use commercially available lens cleaners as they may cause malfunction. Cleaning of the lens is generally not neccessary although this depends on the operating environment.

Before moving the unit, ensure the disc trays are empty.
Failure to do so will risk severely damaging the disc and the unit.



Power indicator [AC IN]

This indicator lights when the unit is pluggged into the AC outlet.

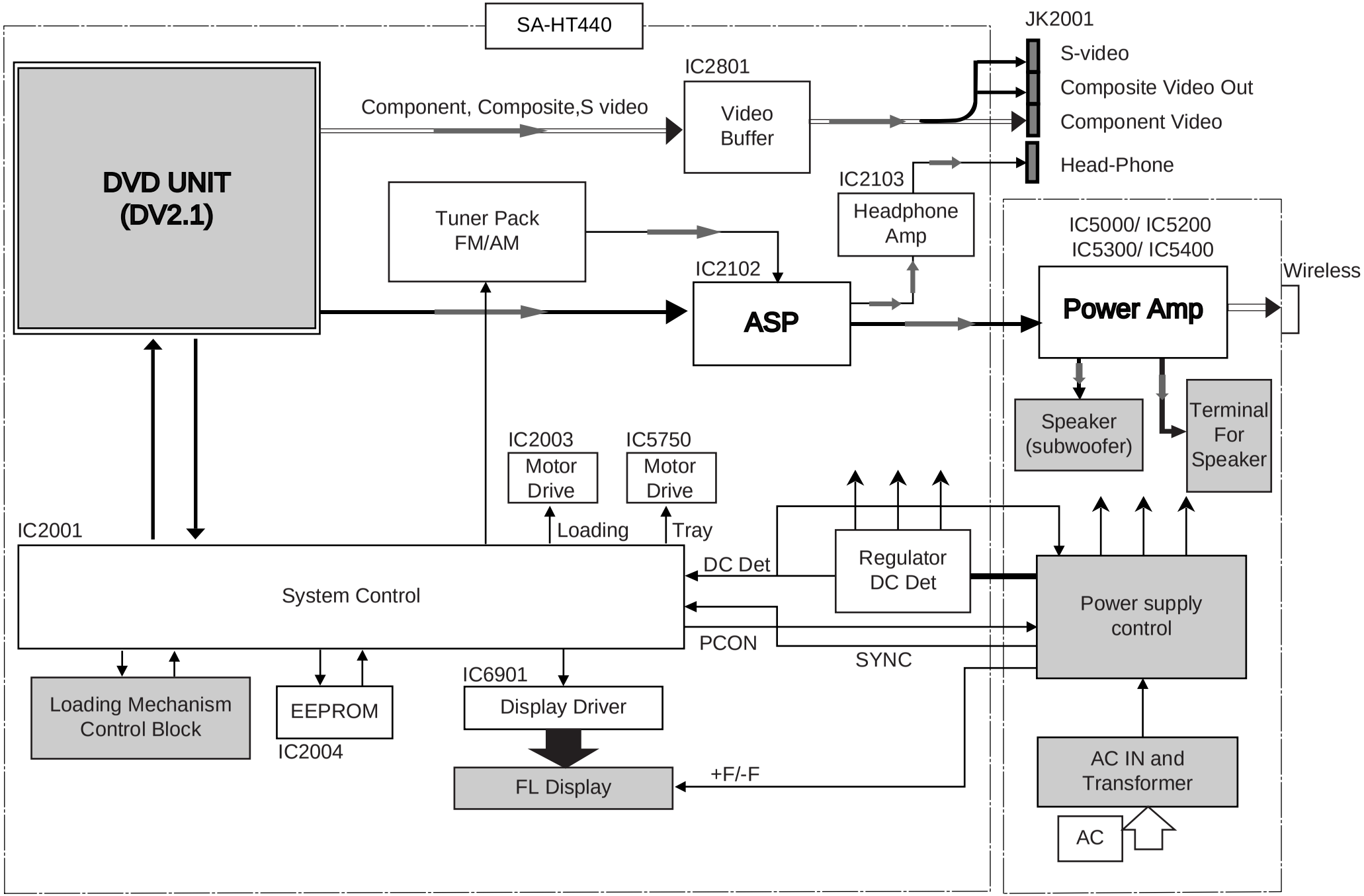
Lighting Ring

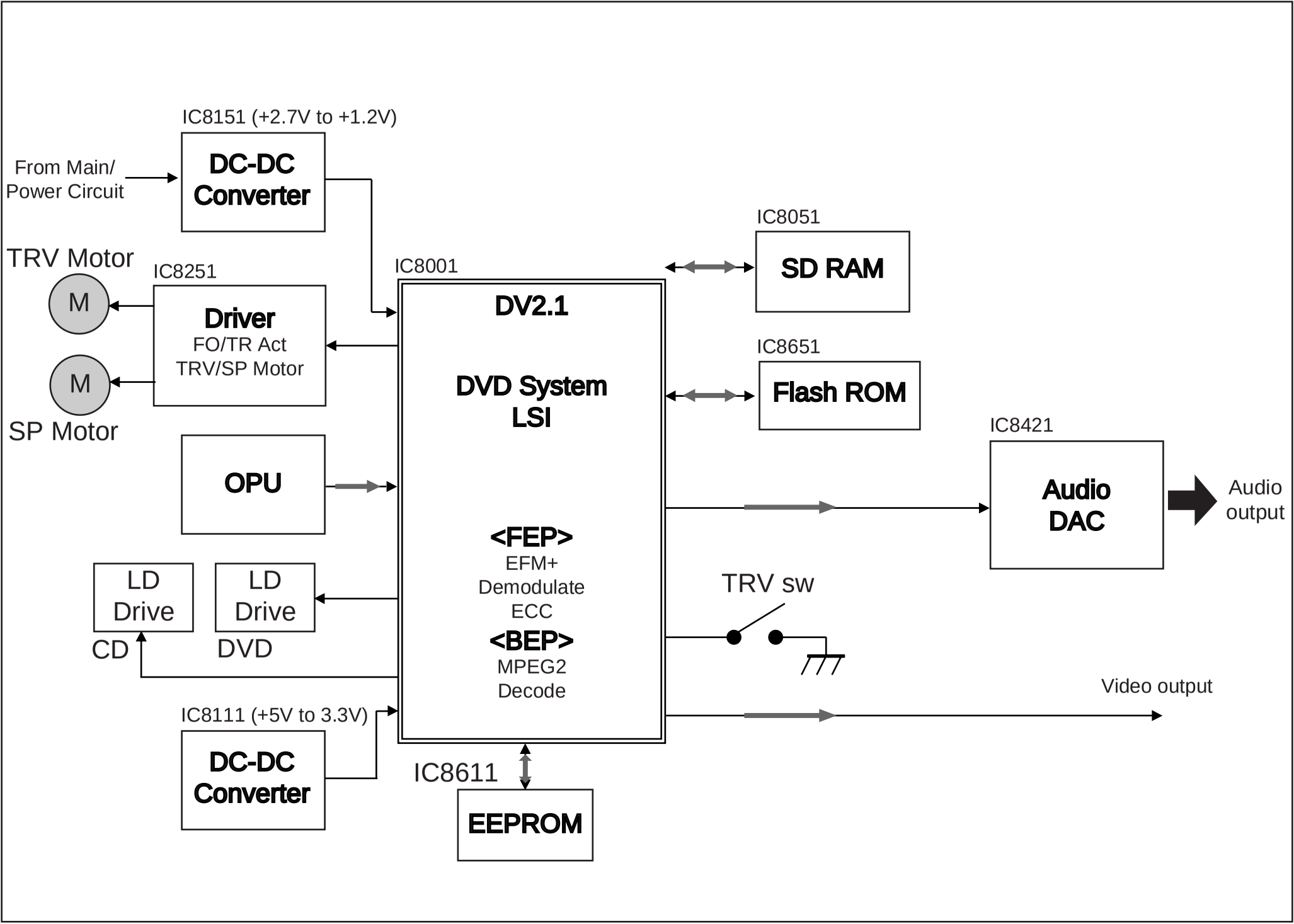
The light goes out when the unit is in standby mode.

MUSIC PORT

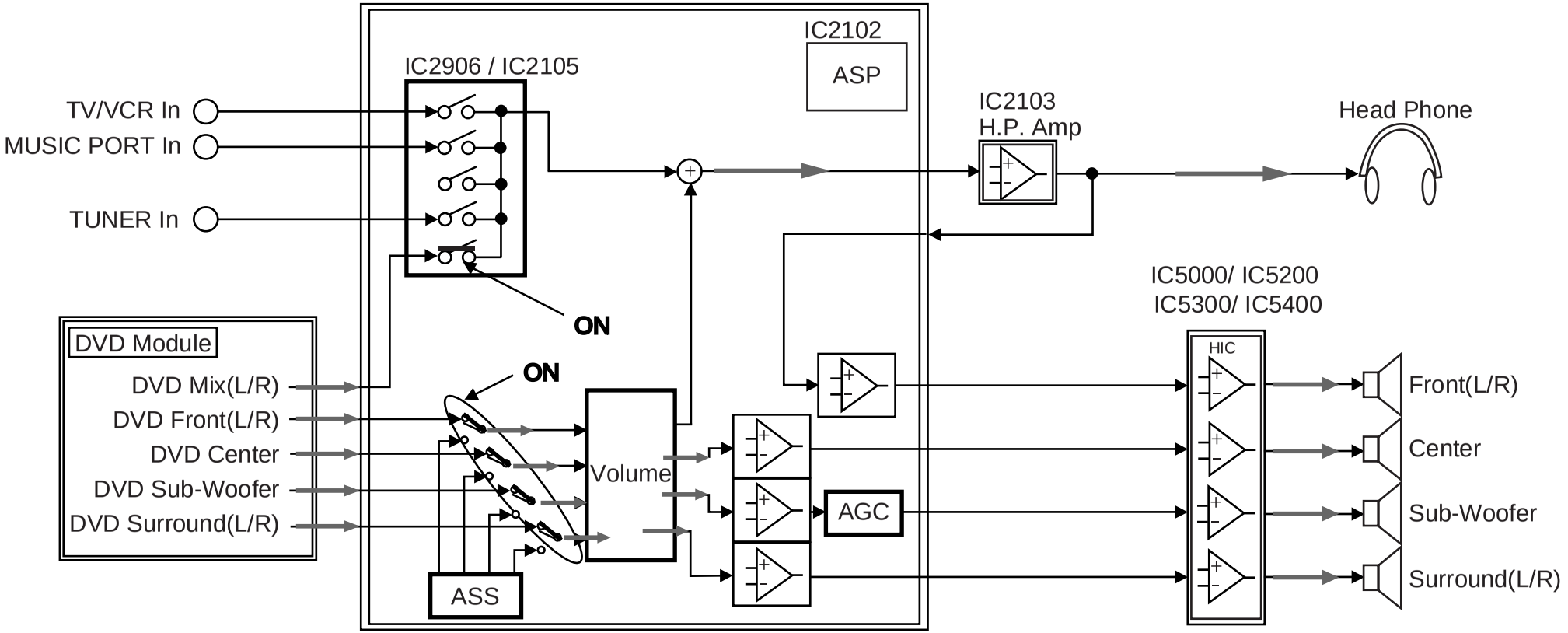
Allows you to connect and enjoy music from an external device (e.g. MP3 player). Refer to your home theater unit's operating instructions.

- Select the appropriate input source on your home theater unit (e.g. "REAR MUSIC P.").
- Plug type: 3.5mm (1/8") monaural

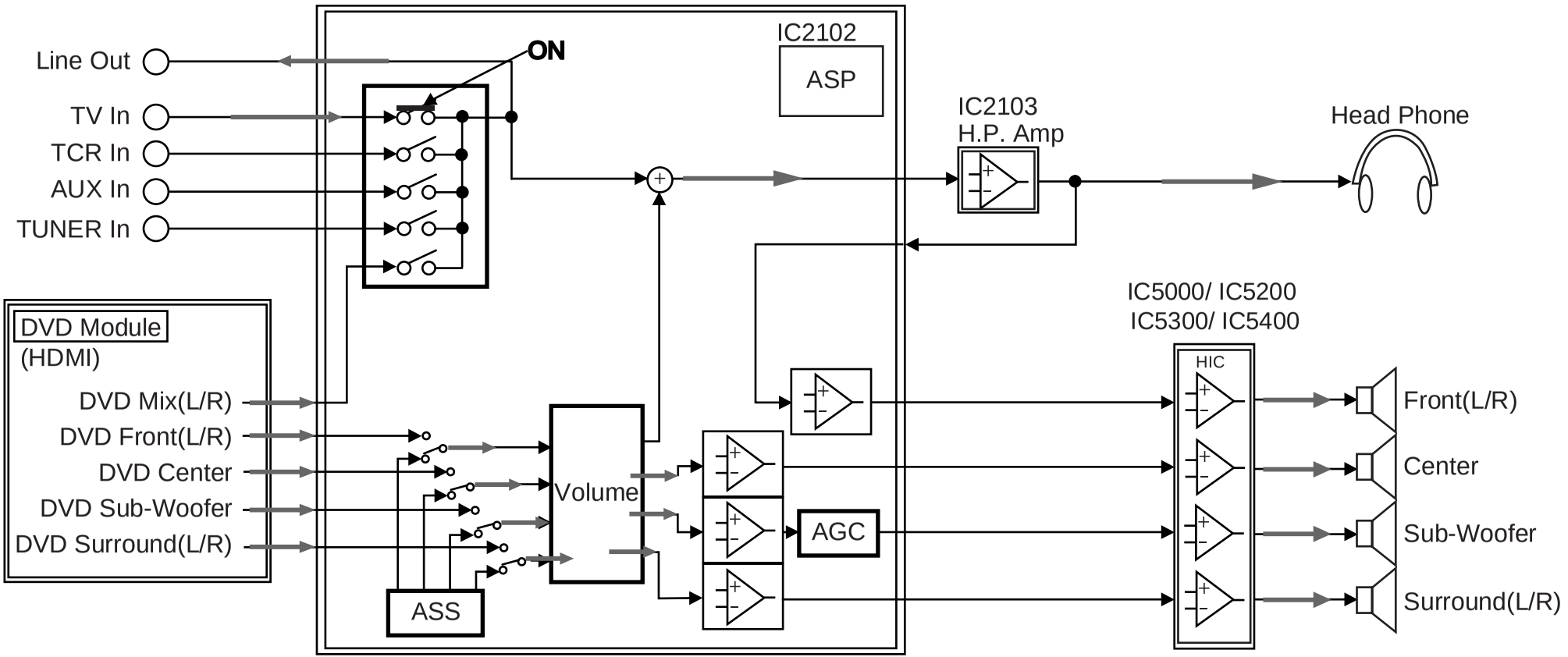

SA-HT440
JK2001
S-video
Composite Video Out
Component Video
Head-Phone
IC2801
Video Buffer
Component, Composite,S video
DVD UNIT (DV2.1)
IC2103
Headphone Amp
Tuner Pack FM/AM
IC5000/ IC5200
IC5300/ IC5400
IC2102
ASP
Power Amp
Wireless
Speaker (subwoofer)
Terminal For Speaker
IC2003
Motor Drive
IC5750
Motor Drive
IC2001
Loading
Tray
DC Det
Regulator DC Det
System Control
Power supply control
PCON
SYNC
IC6901
Loading Mechanism Control Block
EEPROM
IC2004
Display Driver
FL Display
+F/-F
AC IN and Transformer
AC


IC8151 (+2.7V to +1.2V)
From Main/
Power Circuit
DC-DC
Converter
TRV Motor
IC8251
M
Driver
FO/TR Act
TRV/SP Motor
M
SP Motor
IC8001
DV2.1
DVD System
LSI
<FEP>
EFM+
Demodulate
ECC
<BEP>
MPEG2
Decode
IC8051
SD RAM
IC8651
Flash ROM
IC8421
Audio
DAC
Audio
output
OPU
LD
Drive
LD
Drive
CD
DVD
TRV SW
Video output
IC8111 (+5V to 3.3V)
DC-DC
Converter
IC8611
EEPROM

DVD 5.1ch Play Back Mode



2ch Analog input Mode



Ref No.	IC6901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.9	0	0	-0.1	2.8	-	0.7	4.6	3.7	-	-	0	4.8	-21.0	-21.0	-18.9	-18.8	-14.7	-18.9	-14.7
STANDBY	4.9	0	0	0	2.8	-	0.7	4.6	3.7	-	-	0	4.9	-21.0	-21.0	-21.0	-18.9	-10.5	-8.4	-14.7

Ref No.	IC6901																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-12.9	-21.0	-21.0	-14.7	-14.7	-18.9	-21.0	-21.0	-16.8	-21.4	-14.9	-12.8	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1
STANDBY	-14.7	-21.0	-18.9	-10.5	-10.5	-16.8	-21.0	-18.9	-8.4	-21.4	-12.7	-10.6	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1

Ref No.	IC6901																			
MODE	41	42	43	44																
CD PLAY	-19.1	-19.1	4.9	-0.1																
STANDBY	-19.1	-19.1	4.9	0																

Ref No.	Q6901																			
MODE	E	C	B																	
CD PLAY	-0.1	4.5	0																	
STANDBY	0	4.7	0																	

Loading Motor P.C.B.

Ref No.	Q9001			
MODE	1	2	3	4
CD PLAY	1.2	4.5	0	0
STANDBY	0.2	4.8	0	0

Tray Motor P.C.B.

Ref No.	Q9101				Q9102			
MODE	1	2	3	4	1	2	3	4
CD PLAY	1.2	0	4.7	0	2.5	1.2	0.1	0
STANDBY	0.1	0	4.8	0	0.4	-0.2	4.8	0

Sensor P.C.B.

Ref No.	Q9103			
MODE	1	2	3	4
CD PLAY	3.7	2.5	0	0.2
STANDBY	0.2	0.4	0	4.7

Ref No.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	2.9	4.9	0	2.0	3.4	0.7	1.9	2.4	4.9	5.0	-	2.3	0	0	5.0	0	4.9	4.9	4.9
STANDBY	0	2.9	4.9	0	2.0	3.4	0.7	2.0	2.4	4.9	4.9	-	2.3	0	0	4.9	0	4.8	4.9	0
Ref No.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	0	4.8	4.8	-	0.4	2.6	3.1	4.9	4.9	4.7	0	0	0	0.7	4.9	4.9
STANDBY	0	0	0	0	0	4.8	-	-	0.2	0.1	3.2	4.9	4.9	4.7	0	0	0	0.7	4.9	4.9
Ref No.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	4.9	3.1	4.2	4.6	0	4.9	0	0	4.9	0	0	4.9	0	0	0	0	0	0	4.9	0
STANDBY	4.9	3.1	4.3	4.7	5.3	4.9	0	0	4.9	4.5	0	4.9	0	0	0	0	0	0	4.9	0
Ref No.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	4.9	0	0	4.9	0	4.8	0	4.8	4.7	4.8	4.8	0	0	0	0	0	0	0	0	0
STANDBY	4.9	0	0	4.8	0	4.8	0	4.8	4.6	4.9	4.8	0	0	0	0	0	0	0	0	0
Ref No.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	4.9	0	0	0	0	0	3.8	0	4.6	0.6	0	0	4.9	0	0	0	0	0	0	4.9
STANDBY	4.9	0	0	0	0	0	3.7	0	4.6	0.7	0	0	4.9	0	0	0	0	0	0	4.9
Ref No.	IC2003																			
MODE	1	2	3	4	5	6	7	8	9											
CD PLAY	0	0.3	0	0.3	8.7	9.1	0	0	0											
STANDBY	0	0.3	0	0.3	8.6	9.1	0	0	0											
Ref No.	IC2102																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	-0.1	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC2102																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	0	0	0	0	-0.1	0	0	0	0	-0.1	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC2102																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	0	0	0	0	1.4	-0.1	0	0	0	0	0	0.2	-	-	-0.1
STANDBY	0	0	0	0	0	0	0	0	0	1.4	0	0	0	0	0	0	0	-	-	-0.1
Ref No.	IC2102																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	-0.1	0	0	4.9	0	5.1	0	0	0	0	0	-0.1	0	0	0	0	0	0	0	0
STANDBY	-0.1	0	0	4.9	0	5.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ref No.	IC2102																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	-0.1	0	0	-6.9	6.9	0	0	-0.1	-	-	0	0	0	0	0	0	-0.1	0	0
STANDBY	0	0	0	0	-6.9	6.9	0	0	0	-	-	0	0	0	0	0	0	0	0	0
Ref No.	IC2103																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	-0.1	-0.1	-0.1	-6.9	0	0	0	6.9												
STANDBY	0	0	0	-6.9	0	0	0	6.9												
Ref No.	IC2105																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	0	0	6.9	-0.1	-0.1	-0.1	0	-0.1	0	-6.9	0	0	0						
STANDBY	0	0	0	6.9	0	0	0	0	0	0	-6.9	0	0	0						
Ref No.	IC2801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	4.9	0	0	2.1	4.7	1.6	0	1.6	2.1	0	1.6	0	2.1	4.7	2.1	4.9	2.2	2.2	0	2.2
STANDBY	4.9	0	0	2.1	4.7	1.5	0	1.5	2.1	0	1.6	0	2.1	4.7	2.1	4.9	2.2	2.2	0	2.2
Ref No.	IC2801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	2.2	0	1.5	1.7	0	1.5	2.0	0	1.6	1.8	0	2.2								
STANDBY	2.2	0	1.4	1.7	0	1.4	1.7	0	1.5	1.8	0	2.2								
Ref No.	IC2901				IC2902				IC2903						IC2904					
MODE	1	2	3		1	2	3		1	2	3	4	5		1	2	3			
CD PLAY	13.4	0	9.1		12.1	0	9.1		3.2	1.0	0	-	13.4		9.1	0	5.0			
STANDBY	13.6	0	9.1		12.7	0	9.1		3.2	1.0	0	-	13.6		9.1	0	5.0			
Ref No.	IC2906																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	0.1	0	0.1	0	0	-6.9	-0.1	0	0	0	0	0	0.1	0.1	6.9				
STANDBY	0	0	0.2	0.1	0.1	0	-6.9	0	0	0	0.1	0	0.1	0.1	0.1	6.9				
Ref No.	IC2907				IC2908															
MODE	1	2	3		1	2	3													
CD PLAY	6.1	5.0	0		6.1	5.0	0													
STANDBY	6.1	5.0	0		6.1	5.0	0													
Ref No.	Q2001				Q2003				Q2006				Q2098							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	0	4.5		0	4.9	0		0	0	4.1		0	-	0					
STANDBY	0	0	4.5		0	4.9	0		0	5.3	0		0	-	0					
Ref No.	Q2101							Q2307												
MODE	1	2	3	4	5	6		1	2	3	4	5	6							
CD PLAY	0	-4.7	0	-0.1	-4.7	-0.1		0	-0.1	0	0	-0.1	0							
STANDBY	0	0.6	0	0	0.6	0		0	-0.8	0	0	-0.8	0							
Ref No.	Q2308							Q2310				Q2201				Q2901				
MODE	1	2	3	4	5	6		E	C	B		E	C	B		E	C	B		
CD PLAY	0	-0.9	0	0	-0.9	0		0	-0.1	0		0	-4.7	-0.1		0	4.9	-2.5		
STANDBY	0	-0.8	0	0	-0.8	0		0	-0.7	0		1.7	1.7	0		0	4.9	-2.5		
Ref No.	Q2903				Q2904				Q2906				Q2907				Q2909			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	6.9	18.6	7.5		5.6	9.1	6.3		-6.9	-18.6	-7.4		0	-7.4	-0.6		0	4.9	-2.6	
STANDBY	7.0	18.7	7.5		5.6	9.1	6.3		-6.9	-18.6	-7.4		0	-7.4	-0.6		0	4.9	-2.6	
Ref No.	Q2911				Q2912				Q2913				Q2914				Q2935			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.6		0	0	0.6		0	0	0.6		5.6	5.6	5.0		3.3	4.4	3.9	
STANDBY	0	0	0.7		0	0	0.7		0	0.7	0		5.6	5.6	5.0		-	-	-	

Ref No.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.1	3.0	0	3.1	3.3	3.4	3.0	3.1	0	0	3.1	3.4	2.9	3.1	3.0	0	3.0	3.0	3.4	0
Ref No.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.4	-	-	1.5	0.8	1.2	1.0	3.4	0	0.5	1.0	-	-	3.4	0	-	-	2.4	-	-
Ref No.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	-	-	-	1.2	-	-	-	3.4	0	-	-	2.5	0	0	0	-	-	-	-	-
Ref No.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	-	3.4	0	0	0.1	1.0	1.0	3.0	2.8	3.1	0.1	0.1	3.2	0	1.7	.0	1.7	0.1	3.4	0
Ref No.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	3.4	0.1	3.4	3.4	0.1	0.1	0	0.1	1.2	0	0	0	0	0.1	0.1	0	0	3.4	0.8	0.1
Ref No.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	2.4	2.1	1.9	0.3	0	1.9	3.4	2.1	2.1	1.9	1.8	1.1	1.1	1.7	1.7	1.7	1.7	3.3	2.0	1.7
Ref No.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.5	0	0	0.1	0	0	2.3	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.4	2.4	0	2.4	0	0
Ref No.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	0.5	0	0	0	0	1.1	2.2	1.7	2.6	2.6	2.6	2.6	2.6	2.6	2.4	2.4	0	2.4	3.4	0
Ref No.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	3.4	0	0	0	0	3.4	3.4	1.7	0	1.7	0.9	1.2	0	0	0	0.9	1.7	3.4	0	3.4
Ref No.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	0	3.4	0	0	-	-	-	-	-	3.4	0	1.0	1.7	0	1.5	3.4	1.3	0.5	1.5	1.4
Ref No.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
CD PLAY	0	3.4	3.4	1.2	0	1.7	1.4	1.4	3.4	3.4	1.0	1.8	0	-	-	3.4	2	0	1.2	1.6
Ref No.	IC8001																			
MODE	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
CD PLAY	0.2	0	1.7	0.2	3.4	1.7	0.1	0.9	0	0.1	3.4	1.6	-	2.2	0	1.2	0.1	0.1	3.4	3.2
Ref No.	IC8001																			
MODE	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256				
CD PLAY	1.7	0	1.7	3.3	3.4	3.4	0	3.3	2.6	0	3.6	2.8	0	2.9	3.4	2.9				
Ref No.	IC8051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.4	3.2	3.4	3.1	3.2	0.1	3.2	3.4	3.1	3.0	-	0.1	2.9	3.4	2.7	3.3	3.3	3.3	3.0	2.2
Ref No.	IC8051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0.1	-	-	-	-	3.4	0	-	-	-	-	-	-	-	-	3.4	1.7	2.7	-
Ref No.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
CD PLAY	0.1	3.0	3.4	3.2	3.1	0	3.0	3.1	3.4	2.8	2.8	0	2.9	0						
Ref No.	IC8111																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.4	0	0.1	-	-	0	0	4.9												
Ref No.	IC8151																			
MODE	1	2	3	4	5															
CD PLAY	-	-	-	-	-															
Ref No.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	1.7	1.7	1.9	1.9	1.8	0	4.9	3.4	0.1	2.6	2.4	2.5	2.5	4.5	4.6	5.1	4.0	0.1	0.6
Ref No.	IC8251																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	9.6	9.4	1.8	1.7	1.7	1.7	3.4	3.2												
Ref No.	IC8421																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	3.4	3.0	3.4	1.7	0.9	1.7	1.7	4.8	0	0.9	0.1	0.1	0	2.4	2.4	4.9	0	2.4	2.4
Ref No.	IC8421																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	2.4	4.9	-	0	2.5	2.4	2.4	4.8												
Ref No.	IC8601																			
MODE	1	2	3																	
CD PLAY	0	3.2	3.4																	
Ref No.	IC8606																			
MODE	1	2	3	4	5															
CD PLAY	0.7	1.2	0	0	0															
Ref No.	IC8611																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0.1	0.1	0.1	0.1	3.4	3.4	0.1	3.4												
Ref No.	IC8651																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-	-	-	-	-	-	-	-	-	-	-	2.9	3.4	3.4	1.0	-	-	-	-	-
Ref No.	IC8651																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-	-	-	-	-	2.4	0	1.9	1.0	1.0	1.0	1.0	1.4	1.2	1.5	1.5	3.4	1.4	1.2	1.3
Ref No.	IC8651																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	1.4	1.4	1.7	1.7	1.9	0	3.4	-												
Ref No.	IC8691										IC8695									
MODE	1	2	3	4	5						1	2	3	4	5					
CD PLAY	3.0	3.0	0.1	4.3	4.9						0	0	0	0	4.9					
Ref No.	Q8550				Q8551				Q8552				Q8560				Q8561			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	4.9	4.8	4.2		0.1	4.8	0.1		4.8	0	4.8		0.1	0.1	0.7		1.5	3.5	2.1	
Ref No.	Q8562				Q8606				Q8607											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	4.2	2.3	3.6		0	0.1	0.7		0	3.2	0.1									
Ref No.	QR8111				QR8112				QR8420				QR8571							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0.1	0.1	1.2		0.1	4.5	0.1		0	4.0	0.1		3.4	3.3	0.1					

Ref No.	IC5000																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.2	-0.1	-0.1	28.9	-0.1	-29.2	-20.8	29.2	8.1	-3.3	-29.5	-17.0	-29.5	-3.3	8.1	29.2	29.2	-29.2	-0.1	28.9
STANDBY	2.0	-0.1	-0.1	28.9	0	-29.2	-20.9	29.3	8.3	-3.2	-29.4	-16.8	-29.4	-3.3	8.2	29.3	-29.2	-29.2	0	28.9

Ref No.	IC5000																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.8																	
STANDBY	-0.1	-0.1	2.8																	

Ref No.	IC5200																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.0	-0.1	-0.1	28.9	-0.1	-29.2	-21.1	29.2	8.0	-3.3	-29.5	-17.1	-29.5	-3.3	8.1	29.2	-29.2	29.2	-0.1	28.9
STANDBY	2.0	-0.1	-0.1	28.9	0	-29.2	-21.1	29.3	8.1	-3.2	-29.4	-17.1	-29.4	-3.2	8.1	29.3	-29.2	-29.2	0	28.9

Ref No.	IC5200																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.9																	
STANDBY	-0.1	-0.1	2.9																	

Ref No.	IC5300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.0	-0.1	-0.1	28.9	-0.1	-29.2	-21.1	29.2	7.9	-3.3	-29.5	-17.2	-29.5	-3.3	8.0	29.3	-29.2	-29.2	-0.1	28.9
STANDBY	2.0	-0.1	-0.1	28.9	0	-29.2	-21.1	29.3	8.0	-3.2	-29.4	-17.1	-29.4	-3.2	8.0	29.3	-29.2	-29.2	0	28.9

Ref No.	IC5300																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.8																	
STANDBY	-0.1	-0.1	2.8																	

Ref No.	IC5400																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.6	0	0	29.2	0	-29.2	-21.3	29.5	7.8	-3.4	-29.4	-17.1	-29.4	-3.4	-7.9	29.5	-29.2	-29.2	0	29.2
STANDBY	2.6	0	0	29.2	0	-29.2	-21.3	29.3	7.8	-3.4	-29.4	-17.0	-29.4	-3.4	-7.9	29.5	-29.2	-29.2	0	29.2

Ref No.	IC5400																			
MODE	21	22	23																	
CD PLAY	0	0	3.0																	
STANDBY	0	0	3.0																	

Ref No.	IC5500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	0	2.0	2.2	1.9	2.0	-0.1	3.6	1.5	2.1	2.3	1.0	1.5	4.6						
STANDBY	0	4.2	2.0	2.2	1.9	2.0	0	3.4	-	2.1	2.2	1.7	-	4.6						

Ref No.	IC5701																			
MODE	1	2	3	4	5															
CD PLAY	1.5	0	164.4	13.7	0															
STANDBY	1.5	0	164.2	13.8	0															

Ref No.	IC5702				IC5721															
MODE	1	2	3		1	2	3	4	5	6	7	8								
CD PLAY	2.5	0	15.2		0	19.4	0	0.9	164.4	0	163.4	163.8								
STANDBY	2.5	0	15.3		0	19.5	0	0.9	163.5	0	163.2	163.3								

Ref No.	IC5750																			
MODE	1	2	3	4	5	6	7	8	9											
CD PLAY	0	0.3	0	0.3	8.6	9.1	0	0	0											
STANDBY	0	0.3	0	0.3	8.8	9.1	0	0	0											

Ref No.	Q5101				Q5102				Q5500				Q5501				Q5701			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-0.1	4.9	-0.1		-0.1	4.9	-0.1		2.1	0	4.2		2.1	2.1	1.9		6.8	7.9	7.1	
STANDBY	0	4.9	0		0	4.9	0		2.3	0	4.5		2.3	2.3	2.0		6.8	7.9	7.1	

Ref No.	Q5704				Q5705				Q5706				Q5710							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	3.4	4.2	4.0		-0.1	3.2	0.4		-17.5	-17.0	-16.8		-0.1	29.3	-0.1					
STANDBY	3.4	4.2	4.1		0	3.2	0.4		-17.5	-16.9	-16.8		0	29.3	0					

Ref No.	Q5740				Q5741				Q5742				Q5744							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0.2	0.2	0.2		0	4.9	0		0	0.1	0.7		0	4.5	0.3					
STANDBY	0.2	0.2	0.2		0	4.9	0		0	0.1	0.7		0	4.5	0.3					

Ref No.	Q5745				Q5746				Q5747				Q5748							
MODE	1	2	3	4		E	C	B		E	C	B		1	2	3	4			
CD PLAY	1.1	0	-11.6	-11.5		0	0	4.8		14.1	13.7	6.8		0.7	0	0.2	0.2			
STANDBY	1.1	0	-11.4	-11.3		0	0	4.7		14.2	13.8	6.8		0.7	0	0.2	0.2			

Ref No.	Q5750				Q5908				Q5930				Q5931							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	0	4.5		-21.4	-29.4	-22.0		-0.1	0	0.6		-0.1	4.9	0					
STANDBY	0	0	4.5		-21.4	-29.4	-22.0		0	0	0.6		0	4.9	0					

Ref No.	Q5932																			
MODE	E	C	B																	
CD PLAY	1.3	-0.1	0.6																	
STANDBY	1.3	0	0.7																	

SCHEMATIC DIAGRAM-1

A DVD MODULE CIRCUIT

:MAIN SIGNAL LINE :DVD(VIDEO) SIGNAL LINE :DVD(AUDIO) SIGNAL LINE :+B SIGNAL LINE

TO B MAIN CIRCUIT (CN2001) on SCHEMATIC DIAGRAM-5

FP8101

50	VGND			
49	Y/PY/G	LB8303	J0JCC0000119	Y/PY/G
48	VGND			
47	CB/PB/B	LB8304	J0JCC0000119	CB/PB/B
46	VGND			
45	CR/PR/R	LB8305	J0JCC0000119	CR/PR/R
44	VGND			
43	Y	LB8301	J0JCC0000119	Y
42	VGND			
41	C	LB8302	J0JCC0000119	C
40	ADAC5V			
39	MIX-L	LB8421	ERJ2GE0R00X	MIX-L
38	ADAC5V			
37	MIX-R	LB8422	ERJ2GE0R00X	MIX-R
36	ADGND			
35	FL	LB8425	ERJ2GE0R00X	FL
34	ADGND			
33	FR	LB8426	ERJ2GE0R00X	FR
32	ADGND			
31	SL	LB8427	ERJ2GE0R00X	SL
30	ADGND			
29	SR	LB8428	ERJ2GE0R00X	SR
28	ADGND			
27	CNT	LB8429	ERJ2GE0R00X	CNT
26	ADGND			
25	SW	LB8430	ERJ2GE0R00X	SW
24	A-REF	LB8423	ERJ2GE0R00X	A-REF
23	ZFLAG & AMUTE	LB8424	ERJ2GE0R00X	
22	DGND			
21	AUDIODIGITAL	LB8491	ERJ2GE0R00X	AUDIODIGITAL
20	DGND			
19	D+5V	FL8103	F1H0J1050022	D+5V
18	DGND			
17	D+5V			
16	DGND			
15	A+5V	FL8102	F1H0J1050022	A+5V
14	AGND			
13	A+5V			
12	AGND			
11	2.7V	FL8101	F1H0J1050022	
10	DGND			
9	2.7V			
8	DGND			
7	M+9V	FL8104	F1J1E1040022	M+9V
6	MGND			
5	M+9V			
4	MGND			
3	DOP_CPU-CLK	LB8691	ERJ2GEJ101X	DOP_CPU_CLK
2	DOP_CPU-CMD	LB8693	ERJ2GEJ101X	OP_CPU_CMD
1	DOP_CPU-STAT	LB8692	ERJ2GEJ101X	DOP_CPU_STAT

K8421 0

K8106 0

R8420 2.2K

QR8420 UNR521100L MUTING

AMUT

C8421 100P

IC8421 C0FBBK000050 AUDIO DIGITAL TO ANALOG CONVERTER

1	ZERO1	ZERO2	28
2	MS	VOUT1	27
3	MC	VOUT2	26
4	MD	VCOM	25
5	SCK	AGND2	24
6	DATA1	VCC2	23
7	BCK	VOUT3	22
8	LRCK	VOUT4	21
9	VDD	VOUT5	20
10	DGND	VOUT6	19
11	DATA2	AGND1	18
12	DATA3	VCC1	17
13	DATA4	VOUT7	16
14	MSEL	VOUT8	15

STBDAC, SBT3, SBO3, ADAC-CLK, DMIXOUT, SRCK, LRCK, AOUT0, AOUT1, AOUT2

R8421 0

C8426 0.1

C8422 0.1

C8423 33P

C8427 0.1

C8424 0.1

C8428 0.1

MIX-L, MIX-R, A-REF, FL, FR, SL, SR, CNT, SW

IC8151 C0DBEHG00006 +1.2V REGULATOR

CTL VCC GND OUT ADJ (1 2 3 4 5)

C8152 1

C8151 2.2

R8153 620

R8154 1K

VDD

D+5V

D+1.2V

IC8691 C0JBAA000346 AND GATE

OP_CPU-CLK

DOP_CPU_CLK

C8691 0.1

LB8690 J0JCC0000091

IC8695 C0JBAA000346 AND GATE

OP_CPU-STAT

C8695 0.1

DOP_CPU_STAT

IC8111 C0CBCBD00018 +3.3V DC-DC CONVERTER

1	VO	VIN	8
2	NC	NC	7
3	GND	NC	6
4	CN	CONT	5

C8112 1

C8113 470P

C8111 0.1

R8112 22K

R8111 22K

QR8112 UNR521400L POWER CONTROL

QR8111 UNR521400L POWER CONTROL

SCHEMATIC DIAGRAM-2

A DVD MODULE CIRCUIT

—— :+B SIGNAL LINE

IC8601
C0EBE0000384
RESET

IC8606
C0EBA0000031
RESET

Q8607
2SD1819A0L
BUFFER

Q8606
2SD1819A0L
BUFFER

IC8611
C3EBGC000044
EEPROM
(Not Supplied)

IC8651
RFKWMH82H160
16M FLASH ROM

IC8051
C3ABPG000133
64M SDRAM

RX8018 D1H88204A024
RX8017 D1H88204A024
RX8016 D1H88204A024
RX8015 D1H422020001
RX8014 D1H88204A024
RX8013 D1H88204A024
RX8012 D1H88204A024
RX8011 D1H88204A024

SCHEMATIC DIAGRAM-3

A DVD MODULE CIRCUIT

:DVD(AUDIO) SIGNAL LINE :DVD(VIDEO) SIGNAL LINE :CD-DA SIGNAL LINE :+B SIGNAL LINE

IC8001
MN2DS0003APH
DV2.1 LSI

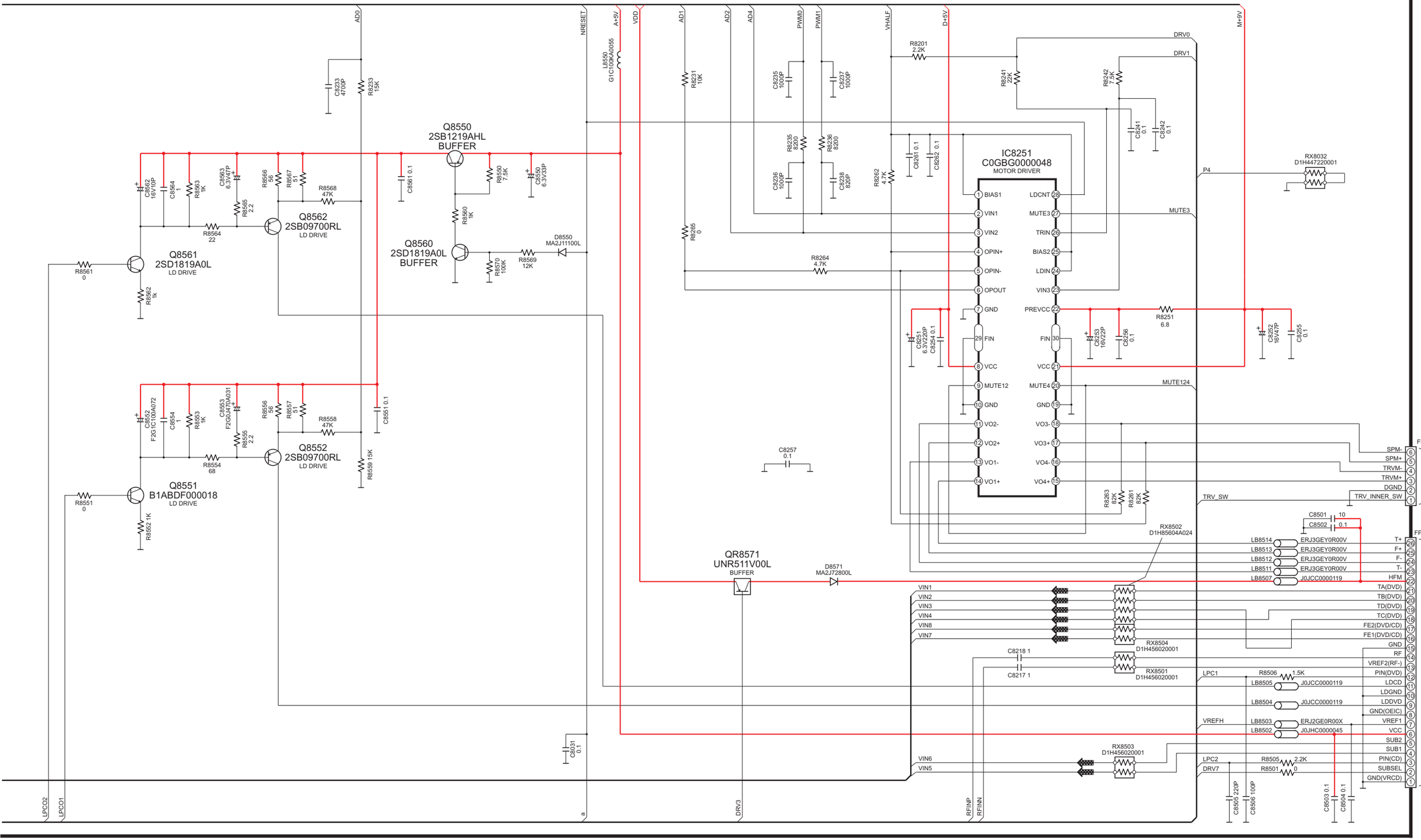
SA-HT440P/PC DVD MODULE CIRCUIT

27	28	29	30	31	32	33	34	35	36	37	38	39

SCHEMATIC DIAGRAM-4

A DVD MODULE CIRCUIT

:CD-DA SIGNAL LINE :+B SIGNAL LINE

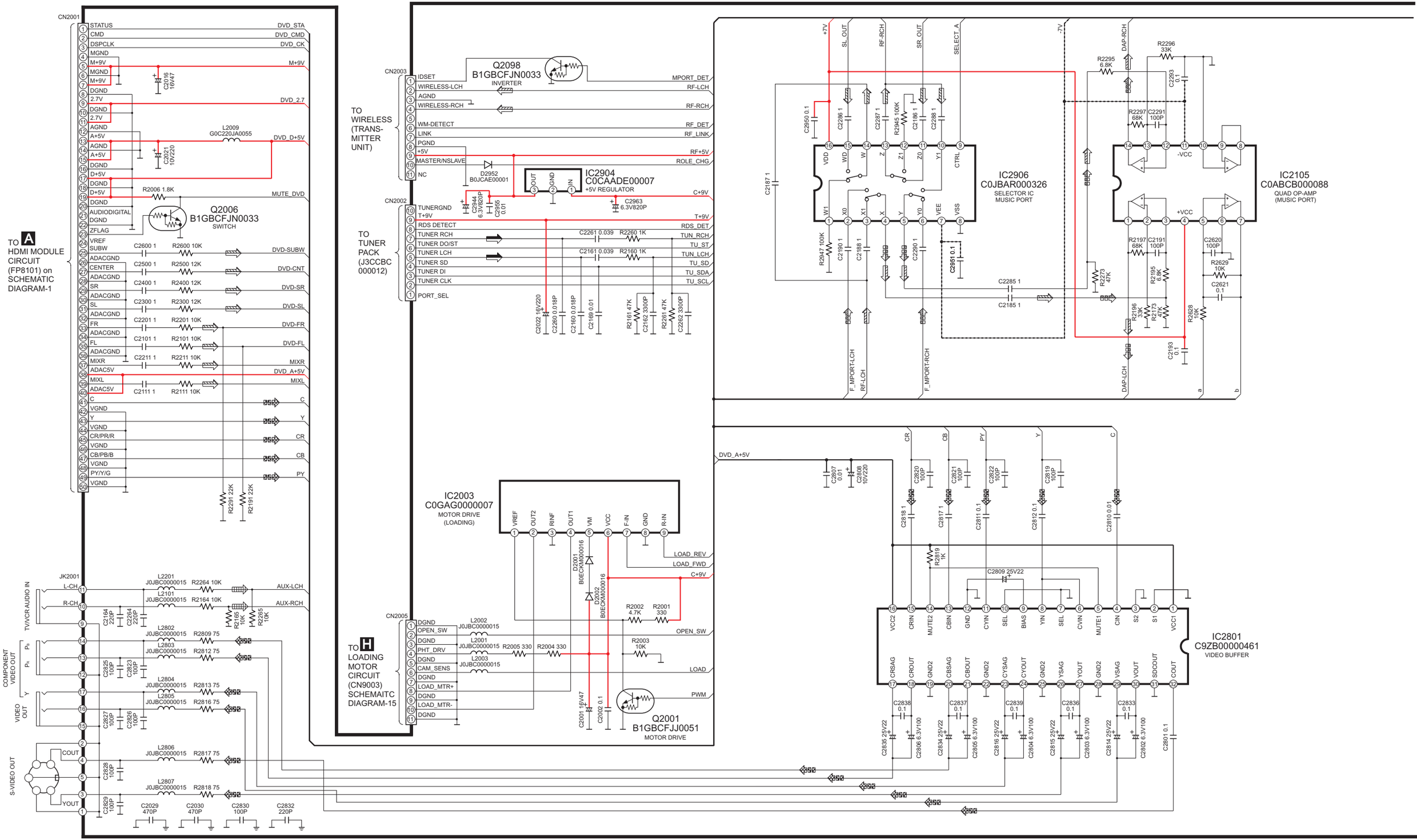


SA-HT440P/PC DVD MODULE CIRCUIT

SCHEMATIC DIAGRAM-5

B MAIN CIRCUIT

:MAIN SIGNAL LINE :MUSIC PORT SIGNAL LINE :FM/AM SIGNAL LINE :DVD(VIDEO) SIGNAL LINE :AUX SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE

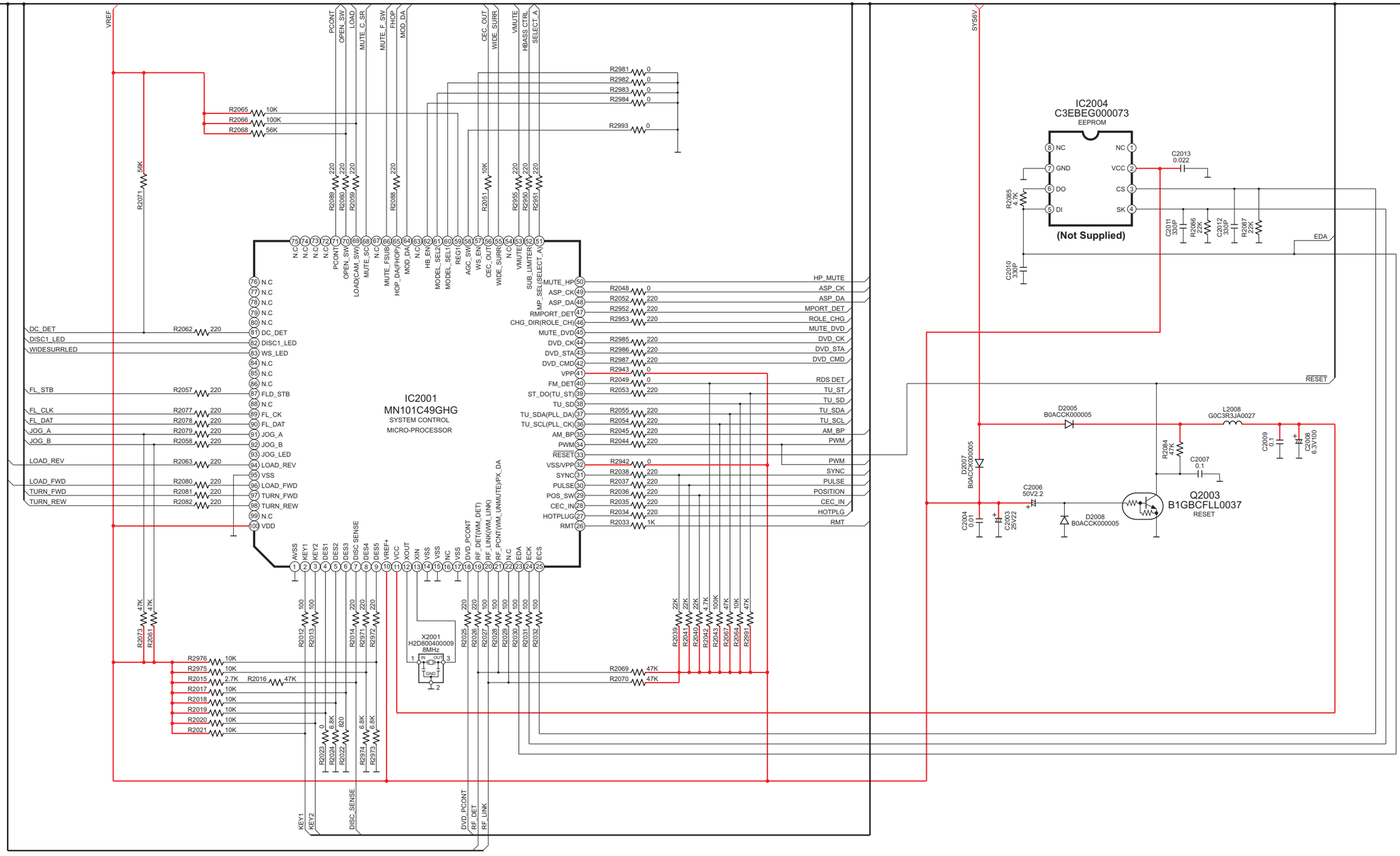


SA-HT440P/PC MAIN CIRCUIT

SCHEMATIC DIAGRAM-6

B MAIN CIRCUIT

—— :+B SIGNAL LINE



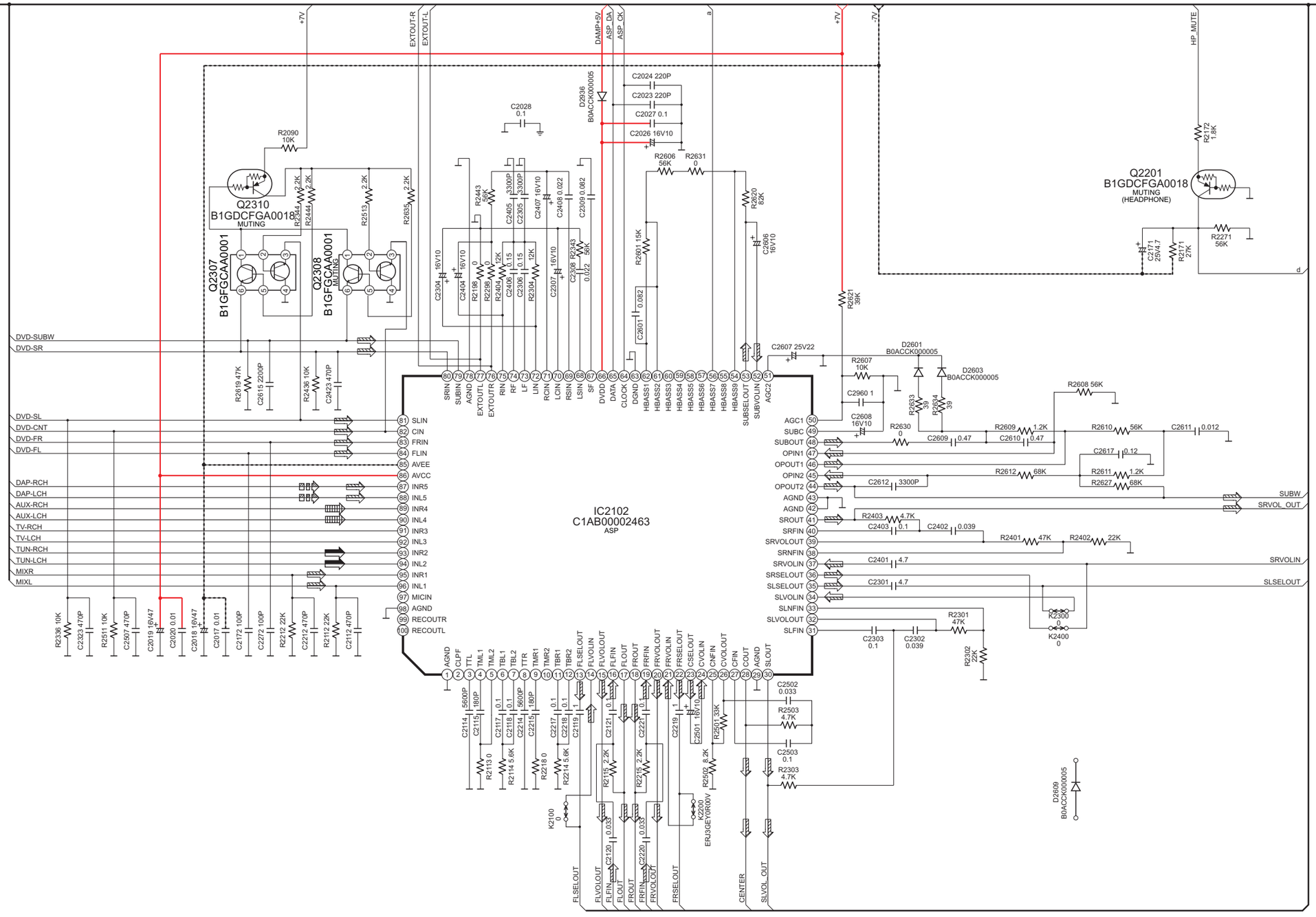
SA-HT440P/PC MAIN CIRCUIT

14	15	16	17	18	19	20	21	22	23	24	25	26

SCHEMATIC DIAGRAM-7

B MAIN CIRCUIT

: AUX SIGNAL LINE : MUSIC PORT SIGNAL LINE : MAIN SIGNAL LINE : FM/AM SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE

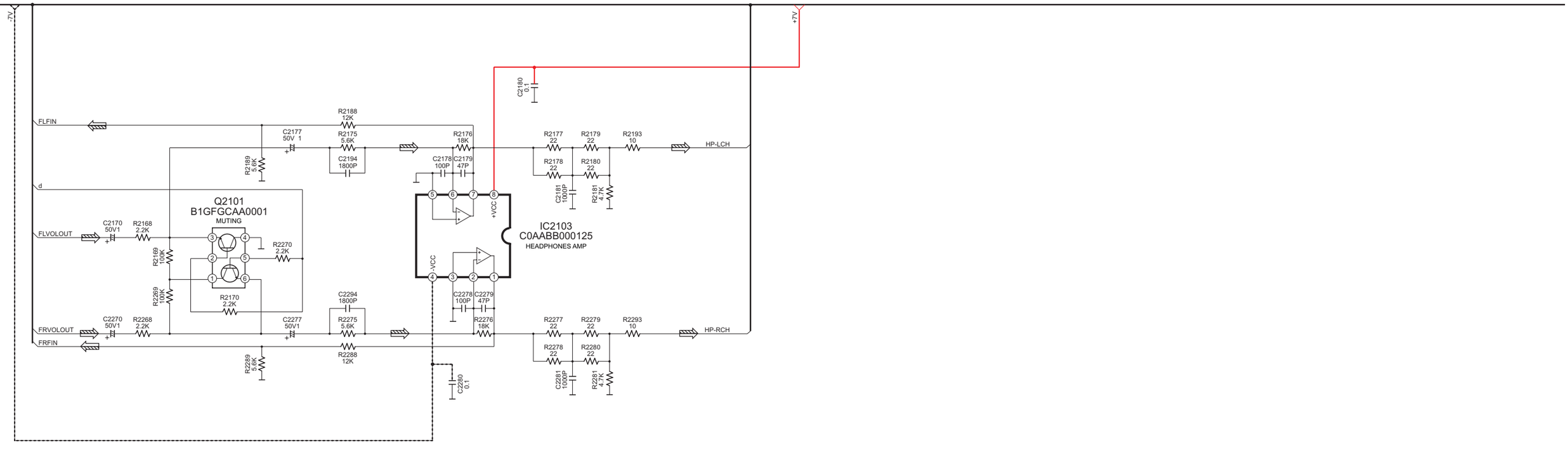


SA-HT440P/PC MAIN CIRCUIT

27	28	29	30	31	32	33	34	35	36	37	38	39

B MAIN CIRCUIT

:MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE



40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52

SCHEMATIC DIAGRAM-9

B MAIN CIRCUIT

:MAIN SIGNAL LINE : MUSIC PORT SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE

SW+5V
C+9V
M+9V
T+9V
L2905 G0A200D00002
D2935 B0ACCK000005
DAMP+5V
RF+5V
IC2902 C0DAZYY00001 +9V REGULATOR
Q2904 B1AAKD000012 +5V REGULATOR
R2990 8.2
L2910 G0A200D0002
IC2901 C0DAZYY00001 +9V REGULATOR
D2906 B0ADCJ000020
D2951 B0ADCJ000020
D2907 B0ADCJ000020
DC_DET
Q2903 B1BACD000018 +7V REGULATOR
R2906 470
R2937 470
R2905 3.9K
R2904 470
D2902 B0BC7R500001
Q2909 B1GBCFJN0033 DC DETECT
Q2901 B1ABCF000176 DC DETECT
+7V
-7V
Q2906 B1BCCD000019 -7V REGULATOR
R2913 470
R2938 470
R2914 3.9K
Q2907 B1ADCF000001 -7V REGULATOR
IC2907 C0CBADG00023 +5V REGULATOR (DVD)
DVD_A+5V
L2904 G0A200D00002
IC2908 C0CBADG00023 +5V REGULATOR (DVD)
DVD_D+5V
Q2935 B1BACD000018 +2.7V REGULATOR
DVD_2.7
L2908 G0A200D00002
L2906 G0A200D00002
L2903 G0A200D00002
L2902 G0A101ZA0028
IC2903 C0DAAMH00012 SWITCHING REGULATOR
D2912 B0BC3R700004
D2950 B0BC7R500001
D2904 B0JCP0000025
L2909 G0A200D00002
FP2000 2A
DVD_PCONT
R2935 4.7K

FLOUT
FROUT
SUBW
SLVOL_OUT
SRVOL_OUT
CENTER
SR_OUT
SL_OUT
C2324 2700P
C2183 50V3.3
C2283 50V3.3
C2619 50V10
C2312 50V3.3
C2412 50V3.3
C2506 50V0.1
R2185 10K
R2285 10K
R2617 10K
R2312 10K
R2412 10K
R2510 12K
C2424 2700P
C2509 2200P
R2512 8.2K
R2439 22K
R2439 22K
R2439 22K
R2439 68K
R2294 22K
R2194 22K
W4A
CN2011
FRONT L
AGND
FRONT R
AGND
SUBWOOFER
AGND
SURROUND L
AGND
SURROUND R
AGND
CENTER
MUTE_C_SR(MODE 1)
MUTE_F_SW(MODE 2)
FHOP
AGND
MUTE_CSW
MOD_DA
TO C POWER(DIGITAL AMP) CIRCUIT (CN5050) on SCHEMATIC DIAGRAM-10

Q2914 B1ADCF000001 MUTING
R2966 4.7K
R2965 4.7K
R2962 47K
R2964 10K
R2963 10K
Q2911 B1ABCF000176 MUTING
R2960 100K
R2967 5.6K
MUTE_C_SR
R2961 10K
Q2912 B1ABCF000176 MUTING
R2968 100K
R2970 5.6K
MUTE_F_SW
R2969 10K
Q2913 B1ABCF000176 MUTING
CN2007
PWM
TURN_REW
TURN_FWD
DISC_SENS
PULSE
POSITION
MGND
MGND
C+9V
C+9V
MGND
MGND
HP-RCH
GND
HP-LCH
DISC1_LED
WIDESURRLED
FL_STB
FL_CLK
FL_DAT
JOG_A
JOG_B
VREF
SW+5V
BLUE_LED
KEY1
KEY2
VSS_GND
RMT
VSS_GND
TO C POWER(SMPS) CIRCUIT (CN5708) on SCHEMATIC DIAGRAM-13
CN2013
FMPORT-RCH
GND
FMPORT-LCH
TO F FL CIRCUIT (H6901) on SCHEMATIC DIAGRAM-14
H2010
-VCC
AGND
+VCC
DC_DET
SYS6V
SYNC
DC_GND
DC_GND
SW5VG_GND
+13V
DC_13V
AM_BP
PCONT
TO C POWER(SMPS) CIRCUIT (CN5701) on SCHEMATIC DIAGRAM-13

SA-HT440P/PC MAIN CIRCUIT

SCHEMATIC DIAGRAM-10

C POWER(DIGITAL AMP) CIRCUIT

:MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE

TO B MAIN CIRCUIT (CN2011) on SCHEMATIC DIAGRAM-9

CN5050: FRONTL, AGND, FRONT R, AGND, SUBWOOFER, AGND, SURROUND, AGND, SURROUND R, AGND, CENTER, MUTE_C_SR(MODE 1), MUTE_F_SW(MODE 2), FHOP, AGND, MUTE_CSW, MOD_DA

C5000 1000P, C5001 1000P, C5315 1000P, C5019 1000P, C5117 1000P, C5221 1000P

C5002 0.1, C5005 0.1, C5314 0.47, C5120 0.1, C5107 0.1, C5222 0.1, C5004 0.1, C5003 0.1, C5317 0.47, C5121 0.1, C5106 0.1, C5223 0.1

R5000 5.6K, R5003 5.6K, R5306 5.6K, R5118 5.6K, R5104 5.6K, R5205 5.6K, R5002 5.6K, R5001 5.6K, R5307 5.6K, R5119 5.6K, R5103 5.6K, R5206 5.6K

IN+_FL, IN+_FR, IN+_SW, IN+_SL, IN+_SR, IN+_C, IN-_FL, IN-_FR, IN-_SW, IN-_SL, IN-_SR, IN-_C

R5573 100, R5575 100, MODE1, MODE2, F_HOP

C5558 10, C5559 10

DC_DET, SW+5V, SIGNAL

F_HOP, R5501 1K, R5502 10K

Q5500 B1ADCE000012 SWITCHING

Q5501 B1ADCE000012 SWITCHING

R5505 100K, R5503 100K, R5508 100K, R5506 6.8K, C5550 470P

X5500 H2A375300003 375KHz

X5501 H2A415300001 415KHz

C5551 100P, C5552 100P, C5553 100P, R5507 1M

IC5500 C0JBAB000011 INVERTER (CLOCK GENERATOR)

1A, 2Y, 3A, 6Y, 5A, 4Y, 3Y, 7GND, VCC 14, 6A 13, 2Y 12, 5Y 10, 4A 9

C5555 10, C5557 6.3V330, R5504 22, R5509 0, C5556 470P

OSC, SW+5V

IC5000 C1BA00000407 AUDIO DIGITAL POWER AMP

OSC 1, INT+ 2, INT- 3, VDDA1 4, SGND1 5, VSSA1 6, PROT 7, VDDP1 8, BOOT1 9, OUT1 10, VSSP1 11, STAB1 12, VSSP2 13, OUT2 14, BOOT2 15, VDDP2 16, VSSD 17, VSSA2 18, SGND2 19, VDDA2 20, IN2- 21, IN2+ 22, MODE 23

C5006 330P, C5026 0.1, C5030 220P, C5025 0.1, C5008 0.015, C5010 220P, C5031 0.22, C5009 0.015, C5029 0.1, C5007 330P

C5012 220P, C5013 220P, R5005 10, C5011 220P, R5004 10, C5027 0.1, C5028 0.1

R5010 10, C5024 0.1, C5020 0.1, C5022 0.1, C5040 100/22, C5018 0.1, C5019 0.1, C5021 0.1, C5023 0.1, R5011 10

L5000 ETQA15A150T

L5001 G0B9R5K00001: FR+, FR-

L5002 G0B9R5K00001: FL-, FL+

C5015 0.47, R5007 22, C5017 0.1, R5030 5.6K, C5135 0.01, C5136 0.01

C5014 0.47, R5006 22, C5016 0.1, R5031 5.6K, C5137 0.01, C5134 0.01

IN-_FR, IN+_FR, MODE2

L5501 J0JKB0000020

+30V, +30V, S_GND, S_GND, -30V, -30V

C5512 35V470, C5513 35V470, C5515 0.1, C5514 0.1, C5511 35V470, C5510 35V470, C5509 35V470, C5508 35V470, C5517 35V470, C5516 35V470

L5500 J0JKB0000020

VDDP, VSSP

Q5102 B1ABCF000176 DC DETECT

Q5101 B1ABCF000176 DC DETECT

R5110 22K, C5133 6.3V100, R5318 120K, R5328 120K, R5218 120K, R5228 120K, R5019 68K, R5020 68K, R5113 68K, R5111 120K

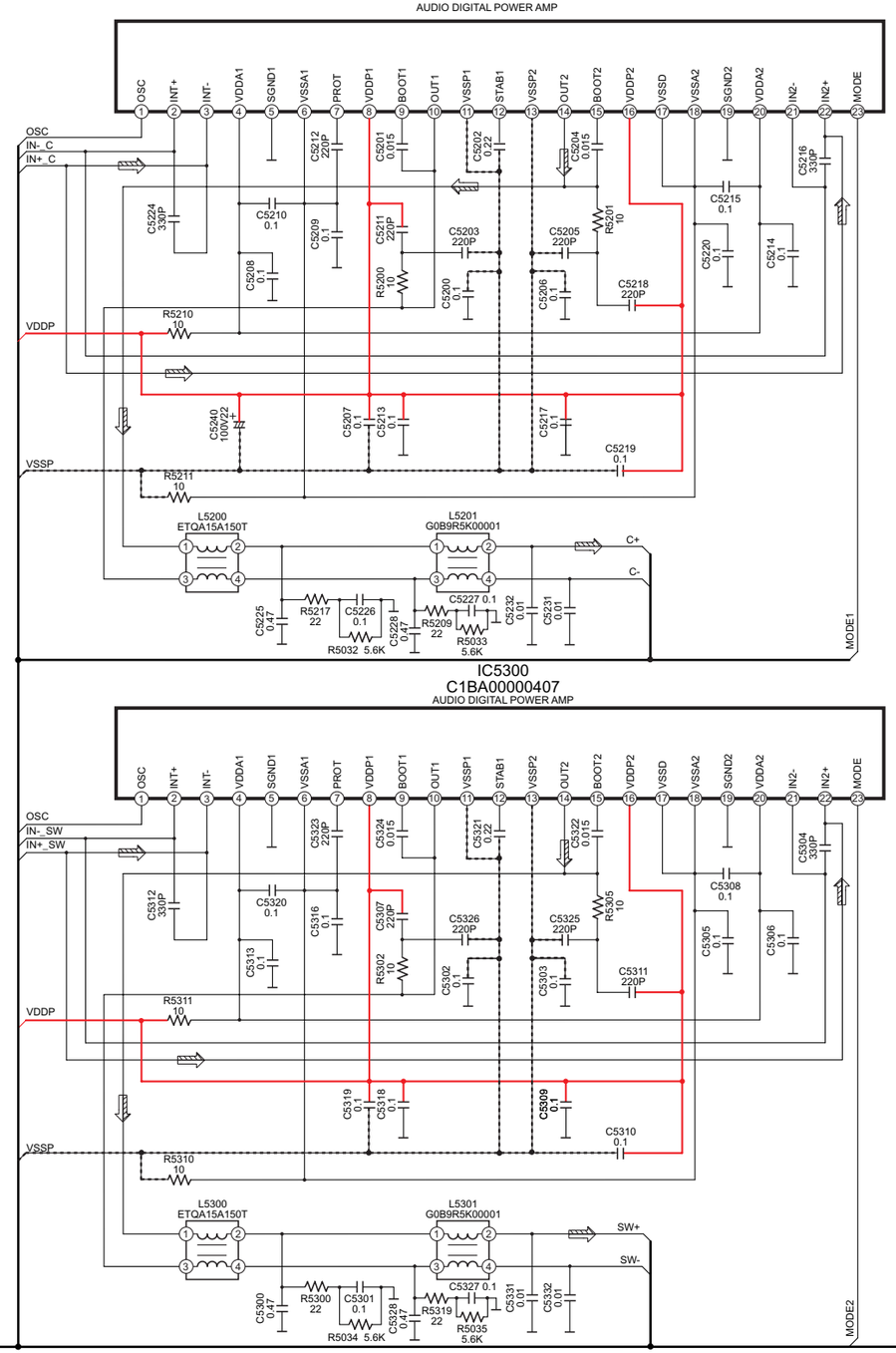
R5021 2.2K, R5022 1.2K

C+, C-, SW+, SW-, FL+, FR+, SL+, SR+, SIGNAL

SCHEMATIC DIAGRAM-11

C POWER(DIGITAL AMP) CIRCUIT

:MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE



SA-HT440P/PC POWER(DIGITAL AMP) CIRCUIT

H G F E D C B A

14 15 16 17 18 19 20 21 22 23 24 25 26

SCHEMATIC DIAGRAM-12

C POWER(SMPS) CIRCUIT

:+B SIGNAL LINE :-B SIGNAL LINE

Q5741
B1ABCF000011
FAN MOTOR DRIVE

Q5740
B1BACG000048
FAN MOTOR DRIVE

Q5742
B1ABCF000011
FAN MOTOR DRIVE

Q5744
B1ABCF000011
FAN MOTOR DRIVE

CN5714
TO FAN UNIT
FANDCOUT
GND

CN5704
TO FAN UNIT
FANDCOUT
GND
FANLOCK

SIGNAL
DC_DET

+30V
S_GND
-30V

AM_BP

Q5710
B1ABCF000011
SWITCHING

T5701
ETS42BJ1G4AC

Q5701
2SC3940ARA
CURRENT LIMMITTING SWITCH

Q5747
B1GDCFJJ0047
SWITCHING

IC5701
STR-F6628
SWITCHING REGULATOR
FB
SOURCE
DRAIN
VCC
GND

IC5702
C0DABFC00002
SHUNT REGULATOR

Q5706
B1BACD000018
DIFFERENTIAL AMP

Q5745
B3PBA0000237
FEED BACK

Q5746
B1GBCFJN0033
PCONT

Q5908
B1ACKD000005
REGULATOR

PC5701
B3PBA0000237

D5712
B0HBSM000043

D5711
B0HBSM000043

D5702
B0ZAZ0000052

D5707
B0BC035A0007

D5705
B0EAMM000057

D5716
B0HFRJ000012

D5748
B0EAMM000057

D5749
B0EAMM000057

D5743
B0ACCK000005

D5744
B0ACCK000005

D5713
B0BC4R0A0006

D5903
MAZ82200ML

D5703
B0BCD2800004

D5704
B0JAME000029

LB5704
J0JKB0000020

+M_13V
+13V
-M_13V
-VP
FL2
FL1
PCONT
SYS6V

SCHEMATIC DIAGRAM-13

C POWER(SMPS) CIRCUIT

D AC-INLET CIRCUIT

:+B SIGNAL LINE :-B SIGNAL LINE

E SUB POWER CIRCUIT

D5701 B0FBAR000018
TH5701 D4CAA2R20001
C5706 0.22
L5703 ELF22V035B
(RED)
(BLK)
R5701 3.3M
C5737 22P
C5736 22P
R5705 390K
C5700 250V560P
R5774 390K
R5778 4.7
Q5748 B3PBA0000237 SYNC SWITCH
SYS6V
SYNC
Q5705 B1ABCF000176 INVERTER
R5786 100K
C5722 0.1
T5721 ETS19AB1Z6AG
D5723 B0EAMM000057
R5771 10
D5721 B0EAMM000057
C5733 16V220
R5724 1.2K
R5725 560
R5772 4.7
C5727 47P
IC5721 C0DABYY00002 SWITCHING REGULATOR
D D D START
OCP VCC GND FB
R5776 330
C5732 0.1
R5726 1K
Q5704 B1ABCF000176 CURRENT LIMITTING SWITCH
D5724 B0BCG3R700004
R5723 4.7K
C5729 50V22
R5727 2.2K
PC5721 B3PBA0000237
R5930 10K
Q5931 B1ABCF000011 TRANSFORMER TEMP. DETECT
Q5932 B1ADCF000001 TRANSFORMER TEMP. DETECT
R5931 10K
R5932 10K
R5933 4.2K
R5934 10K
D5764 B0ACCK000005
D5761 B0ACCK000005
TH5702 D4CC11140013
Q5930 B1ABCF000011 TRANSFORMER TEMP. DETECT
DC_DET
+13V
+M_13V
C5738 680P
R5774 4.7
D5746 B0BCJ6800003
R5777 3.3K
C5725 50V2.2
D5752 B0BC3R400001
D5745 B0EAKM000117
F1 25V 6.3A
ZA5702 EYF52BCY
ZA5701 EYF52BCY
L5701 ELF15N050A
DZ5701 0.22
R5751 470K
C5701 250V0.1
P5701
AC120V 60Hz
CHASSIS GND
CN5710
CN5711
ZJ5701 K9ZZ00001279
IC5750 C0GAG0000007 MOTOR DRIVE(TRACK)
VREF OUT2 RINF OUT1 VM VCC F-IN GND R-IN
TURN_REV
TURN_FWD
C+9V
R5750 330
R5780 330
D5751 B0ECKM000016
R5755 330
R5752 4.7K
Q5750 B1GBCFJJ0051 MOTOR DRIVE
PWM
D5750 B0ECKM000016
R5781 10K
L5710 J0JKB0000020
L5720 J0JKB0000020
-30_SENSE
+30V
DC_DET
SYS6V
SYNC
+13V
AM_BP
PCONT
CN5701
-VCC
GND
+VCC
DC_DET
SYS6V
SYNC
DC_GND
DC_GND
DC_GND
M+13V
DC+13V
AM_BP
PCONT
TO B MAIN CIRCUIT (H2010) on SCHEMATIC DIAGRAM-9
CN5702
TRV-
TRV+
DGND
PHOTO_DRIVER
DGND
DISC_SENSOR
DGND
PULSE_SENSOR
DGND
POSITION_SENSOR
DGND
L5750 J0JBC0000015
L5752 J0JBC0000015
L5753 J0JBC0000015
DISC_SENS
PULSE
POSITION
TO J SENSOR CIRCUIT (CN9102) on SCHEMATIC DIAGRAM-15
CN5709
CN5712
STBY_LED
KEY1
DGND
VREF
RMT
F+
F-
FLGND
SW+5V
FL_IC_DATA
FL_IC_CLOCK
FL_IC_STB
-VP
WIDESURR LED
DISC5_LED
F_MPORT-RCH
AGND
F_MPORT-LCH
MPORT_CTRL
DGND
KEY2
VREF
JOG_B
JOG_A
HP-RCH
AGND
HP-LCH
CN5713
CN5706
CN5708
PWM
TURN_REV
TURN_FWD
DISC_SENS
PULSE
POSITION
MGND
C+9V
F_MPORT-RCH
F_MPORT-LCH
HP-RCH
AGND
HP-LCH
DISC5_LED
WIDESURR_LED
FL_IC_STB
FL_IC_CLOCK
FL_IC_DATA
JOG_A
JOG_B
VREF
SW+5V
BLUELED
KEY1
KEY2
DGND
RMT
STBY_LED
CN5707
CN5705
TO F FL CIRCUIT (CN6902) on SCHEMATIC DIAGRAM-14
TO G HEADPHONE CIRCUIT (CN6901) on SCHEMATIC DIAGRAM-14
TO B MAIN CIRCUIT (CN2007) on SCHEMATIC DIAGRAM-9
SW+5V

SA-HT440P/PC POWER(SMPS) CIRCUIT

14 15 16 17 18 19 20 21 22 23 24 25 26

H G F E D C B A

SCHEMATIC DIAGRAM-14

F FL CIRCUIT

: MUSIC PORT SIGNAL LINE : MAIN SIGNAL LINE :+B SIGNAL LINE :-B SIGNAL LINE

FL6901
A2BD00000160
FL DISPLAY

IC6901
C0HBB0000057
DISPLAY DRIVER

Q6901
B1GBCFJN0033
LED DRIVE

Z6900
B3MAZ0000023
REMOTE SENSOR

G HEADPHONE CIRCUIT

VR6800
EVEKE2F3024M
VOLUME ENCODER

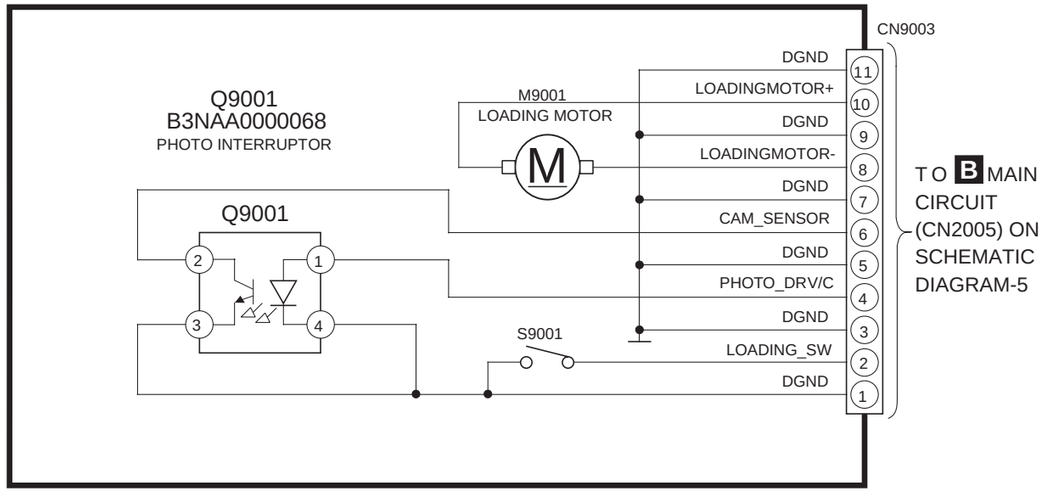
TO E SUB POWER (CN5705) on SCHEMATIC DIAGRAM-13

TO E SUB POWER CIRCUIT (CN5707) on SCHEMATIC DIAGRAM-13

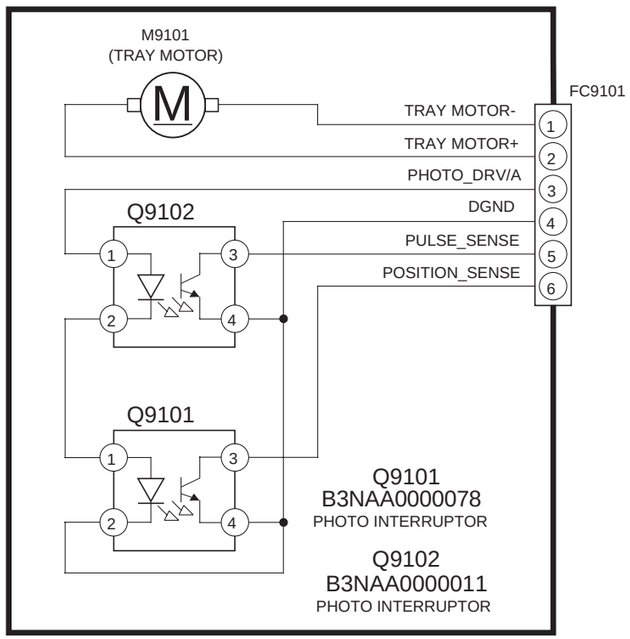
TO B MAIN CIRCUIT (CN2013) on SCHEMATIC DIAGRAM-9

SA-HT440P/PC FL/HEADPHONE CIRCUIT

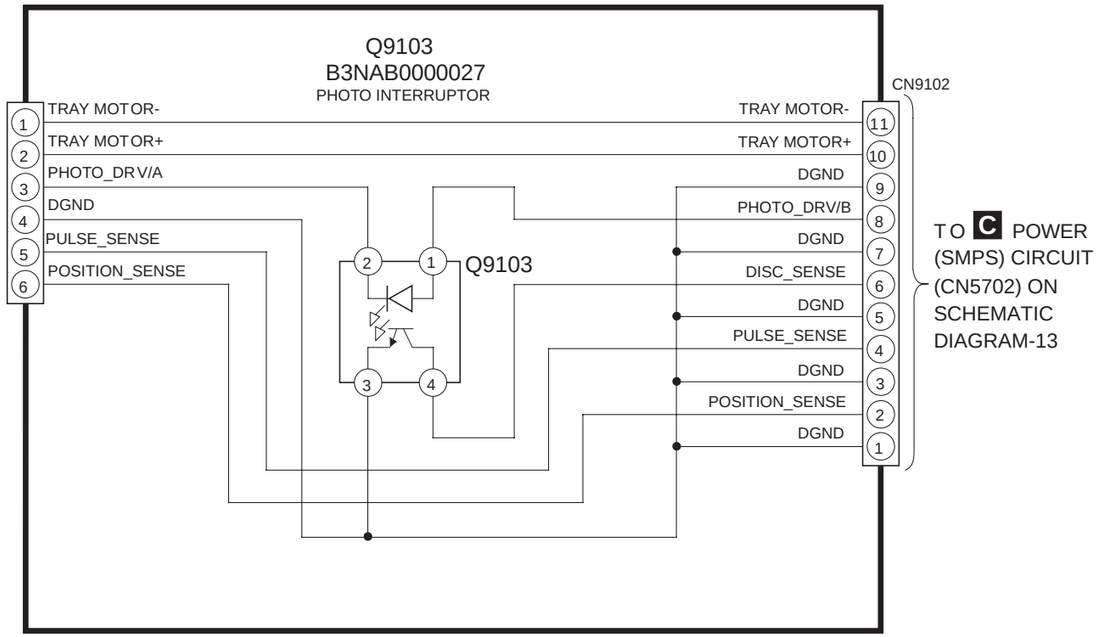
H LOADING MOTOR CIRCUIT



I TRAY MOTOR CIRCUIT



J SENSOR CIRCUIT



Item		FL Display	Key Operation
Mode Name	Description		Front Key
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display.	E0 19 019 N0	In STOP (no disc) mode, press STOP button on the player, and "7" button on the remote control unit. Cancelled automatically 5 seconds later. Press "FL Display" button on remote control unit for next page. (FL Display)
Initialization	Initialization User settings are cancelled and player is initialized to factory setting.	INIT	In STOP (no disc) mode, press STOP button on the player , and ≧10 button on the remote control unit.
Region display	Region display & mode	1 PN 411 Panel controller jumper information N: NTSC / 6: PAL60 N: noPAL / P: PAL Region No.	In STOP (no disc) mode, press STOP button on the player, and "6" button on the remote control unit. Cancelled automatically 5 seconds later.
DVD module firmware version display	DVD module firmware version is displayed on the FL Display.	1 B2H302 System controller version Destination System controller generation Region	In STOP (no disc) mode, press STOP button on the player, and "8" button on the remote control unit. Cancelled automatically 5 seconds later.
Communication error display	Displays frequency of communication errors between system control IC and mechanism control IC during DVD module.	ER 01 30	In STOP (no disc) mode, press STOP button on the player, and "MENU" button on the remote control unit. Cancelled automatically 5 seconds later.
DVD Module Reset	To reset DVD Module. (After initialisation) Refer to Section 9.5.3 for more information.	DVD RESET	While in initialization mode, press and hold STOP button on player follow by "ENTER" button on remote control unit. Cancelled automatically 5 seconds later.